A VOCATIONAL READER

PRESSEY

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A VOCATIONAL READER

OTHER VOCATIONAL GUIDANCE BOOKS

J. ADAMS PUFFER, Editor

Vocational Guidance—The Teacher as a Counselor. By J. ADAMS PUFFER.

Vocational Guidance for the Professions. By EDWIN TENNEY BREWSTER.

Vocational Guidance for Girls. By MARGUERITE STOCKMAN DICKSON.

A Vocational Reader

By
PARK PRESSEY

With an Introduction by
J. ADAMS PUFFER

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THE INTRODUCTION

To be true to American ideals every youth must select his own vocation and be responsible for making his own career. In harmony with this principle one of the safe and sane methods of Vocational Guidance is to expose each boy and girl to the largest possible number of temptations to a good life-work. Without being didactic Mr. Pressey has made an interesting pioneer book in this field.

J. Adams Puffer

ACKNOWLEDGMENTS

Thanks are due for the use of selections in this book as follows:

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THE PREFACE

In these days of highly specialized industry there is no longer opportunity for boys coming home from school to

> Look in at the open door,
> See the flaming forge,
> And hear the bellows roar.

Nor can girls watch maid or matron

> Seated beside her wheel, the carded wool like a snowdrift
> Piled at her knee, her white hands feeding the ravenous spindle.

Blacksmith and spinner are behind closed doors with "No Admittance" signs upon them. Hence it becomes the problem of the public schools to give pupils glimpses of the different lines of business activity.

This is the first offering of a vocational reader as an aid to the teacher in meeting her responsibilities as a vocational counselor. It is believed that, in addition to furnishing selections of literary merit, this book will stimulate boys and girls to select vocations whereby they can take their part in the world's work, and through its vivid pictures of present-day industry enable the pupil to choose an occupation in harmony with inclination and natural talents.

My thanks are cordially given to those writers and publishers who have generously permitted the use of copyrighted matter. Especially am I indebted to the editors of the *Youth's Companion*,

not only for the use of articles but for help in finding selections of the right sort. I also thank all who have furnished information for biographical and autobiographical sketches.

PARK PRESSEY

Boston
January 1, 1916

VOCATION

Photograph by Paul Thompson

Dan Beard, National Commissioner of Boy Scouts, and Ernest Thompson Seton giving medals to highest point winners

A VOCATIONAL READER

THE MEN OF TO-MORROW

DAN BEARD

(National Commissioner of Boy Scouts)

You boys of to-day are to be the men of to-morrow. We, who are now sending you messages, giving you advice, showing you how to do things, to-morrow will be the men of yesterday, and when that time comes the management of the United States will be in your hands. Boys of to-day will occupy the governors' chairs in all the states of this Union to-morrow. Every policeman, every lawyer, every judge, every alderman, every mayor, every congressman, every senator, every president must give up his place to one of you; and if you are good boys to-day, we shall have a finer set of men to-morrow than we had yesterday.

We want more George Washingtons, more Abraham Lincolns, more Henry Georges, more Thomas Jeffersons, more William Penns, more John Bigelows, more Mark Twains, more Wilbur Wrights, more Thomas Edisons—and we must find them among you fellows.

You have seen a lot in the papers about conservation of our resources. The most valuable resources we have are the boys of America. Every

Courtesy of Boy Scouts of America

The boy scout movement is inspiring the youth of the country with a spirit of helpfulness and social service

boy who goes astray and becomes a misfit and a failure is a great loss to his country. Every honorable, brave, efficient boy is a tremendous asset.

"Some people complain that they 'lead a dog's life.' But are they as faithful to their trust, as loyal to friends, as content with their lot, as responsive to kindness, as free from the inclination to growl, as the dogs they know?"

A MESSAGE TO GARCIA

ELBERT HUBBARD

When war broke out between Spain and the United States, it was very necessary to communicate quickly with the leader of the Insurgents. Garcia was somewhere in the mountain fastnesses of Cuba—no one knew where. No mail or telegraph message could reach him. The President must secure his coöperation, and quickly.

What to do!

Some one said to the President, "There's a fellow by the name of Rowan will find Garcia for you, if anybody can."

Rowan was sent for and given a letter to be delivered to Garcia. How "the fellow by the name of Rowan" took the letter, sealed it up in an oilskin pouch, strapped it over his heart, in four days landed by night off the coast of Cuba from an open boat, disappeared into the jungle, and in three weeks came out on the other side of the island, having traversed a hostile country on foot, and delivered his letter to Garcia, are things I have no special desire now to tell in detail.

The point I wish to make is this: McKinley gave Rowan a letter to be delivered to Garcia; Rowan took the letter and did not ask, "Where is he at?"

By the Eternal! there is a man whose form should be cast in deathless bronze, and the statue placed in every college of the land. It is not more book

learning young men need, or instruction about this and that, but a stiffening of the vertebræ which will cause them to be loyal to a trust, to act promptly, concentrate their energies — do the thing — "Carry a message to Garcia!"

No man who has endeavored to carry out an enterprise where many hands were needed, but has been well-nigh appalled at times by the inability or unwillingness of the average man to concentrate on a thing and do it.

Put this matter to a test: You are sitting now in your office — six clerks are within call. Summon any one and make this request: "Please look in the encyclopedia and make a brief memorandum for me concerning the life of Correggio."

Will the clerk quietly say, "Yes, sir," and go do the task?

On your life he will not. He will look at you out of a fishy eye and ask one or more of the following questions:

Who was he?

Which encyclopedia?

Where is the encyclopedia?

Was I hired for that?

Don't you mean Bismarck?

What's the matter with Charlie doing it?

Is he dead?

Is there any hurry?

Shan't I bring you the book and let you look it up yourself?

What do you want to know for?

And I will lay you ten to one that after you have answered the questions, and explained how to find the information, and why you want it, the clerk will go off and get one of the other clerks to help him try to find Garcia—and then come back and tell you there is no such man.

Now if you are wise you will not bother to explain to your "assistant" that Correggio is indexed under the C's, not in the K's, but you will smile sweetly and say, "Never mind," and go look it up yourself.

Advertise for a stenographer, and nine out of ten who apply can neither spell nor punctuate—and do not think it necessary to. Can such a one write a letter to Garcia?

"You see that bookkeeper," said the foreman to me in a large factory.

"Yes, what about him?"

"Well, he's a fine accountant, but if I'd send him up town on an errand he might accomplish the errand all right; and on the other hand, might stop at four saloons on the way, and when he got to Main Street would forget what he had been sent for."

Can such a man be intrusted to carry a message to Garcia?

We have recently been hearing much maudlin sympathy expressed for the "downtrodden denizen of the sweatshop" and the "homeless wanderer searching for honest employment," and with it all often go many hard words for the men in power.

The errand boy who stops to idle on the way is not one who can carry a message to Garcia

Nothing is said about the employer who grows old before his time in a vain attempt to get frowsy ne'er-do-wells to do intelligent work, and his long, patient striving with "help" that does nothing but loaf when his back is turned. In every store and factory there is a constant weeding-out process going on. The employer is constantly sending away "help" that have shown their incapacity to further the interests of the business, and others are being taken on. No matter how good times are, this sorting continues, only if times are hard and work is scarce, the sorting is done finer—but out and forever out, the incompetent and unworthy go. It is the survival of the fittest. Self-interest prompts every employer to keep the best—those who can carry a message to Garcia.

I know one man of really brilliant parts who had not the ability to manage a business of his own, and yet who is absolutely worthless to any one else, because he carries with him constantly the insane suspicion that his employer is oppressing, or intending to oppress him. He cannot give orders, and he will not receive them. Should a message be given him to take to Garcia, his answer would probably be, "Take it yourself."

To-night this man walks the streets looking for work, the wind whistling through his threadbare coat. No one who knows him dare employ him, for he is a regular firebrand of discontent. He is impervious to reason, and the only thing that can impress him is the toe of a thick-soled No. 9 boot.

Have I put the matter too strongly? Possibly I have; but when all the world has gone a-slumming I wish to speak a word of sympathy for the man who succeeds—the man who, against great odds, has directed the efforts of others, and, having succeeded, finds there's nothing in it—nothing but bare board and clothes.

I have carried a dinner pail and worked for day's wages; and I have also been an employer of labor. My heart goes out to the man who does his work when the "boss" is away as well as when he is at home. And the man who, when given a letter for Garcia, quietly takes the missive, without asking any idiotic questions, and with no lurking intention of chucking it into the nearest sewer, or of doing aught else but deliver it, never gets "laid off."

Civilization is one long, anxious search for just such individuals. Anything such a man asks shall be granted — his kind is so rare that no employer can afford to let him go. He is wanted in every city, town, and village — in every office, shop, store, and factory. The world cries out for such — he is needed and needed badly — the man who can carry a message to Garcia.

PITCHER, SHORTSTOP, OR OUT-FIELDER?

ELBRIDGE B. LINCOLN

Any one who has tried to manage a school team knows how great a difference there is in ball players. The best of pitchers is usually a failure at shortstop; the star out-fielder may make only errors when put on first base; and the catcher who can hold every curve put over the plate often cannot himself pitch a curve of any kind.

The same difference holds true in business and professional life. One man makes a splendid doctor, another amasses a fortune as a manufacturer, while others succeed as farmers, lawyers, teachers, or merchants. But the doctor would probably have been a failure had he tried farming, and the lawyer might have gone into bankruptcy as a manufacturer. In fact, life is only a great ball team, with a vast number of different positions to be filled, and each place calls for special ability on the part of the man or woman who is to fill it as it should be filled.

When a boy tries to play a position on the team

for which he is not fitted, he not only shows his own weakness but he makes the other players less efficient. So, in life, every misfit puts a burden on the rest of the world, and the community is worse off than it would be without him. Modern business conditions are so delicately balanced that it is essential for each man to find the right place.

International News Service

Christy Mathewson, star pitcher of the New York Giants, starting the "Fade-away." Nine pitchers like "Matty," however, would fail to make a winning team

Every boy, at some time in his school life, wants to be a pitcher. Peculiar glory covers the player who stands in the box and tries to outguess the batter. And yet a team of nine pitchers would never win a game. It takes in-field, out-field, and battery to cover all positions successfully.

And what a sorry mess this world would be if every one were a Shakespeare, or a Napoleon, or an Edison. The particularly brilliant men have their part to do, but it requires well-fitted workers in all the different places to make the game a winning one. The fact that nature made us so very different is our salvation. The vital question is, "What is the kind of work for which we are best fitted?"

One of the most important persons connected

Photograph by Wade Mountfortt, Jr.

Future baseball stars shining on the vacant lots about the city

with a ball team is the coach. He is a man of experience, has played the game, and has learned to know the possibilities in each candidate. His authority is recognized by the players, and his judgment decides in what position each one shall play. A good coach can often make a strong team out of a weak one, simply by shifting the players about.

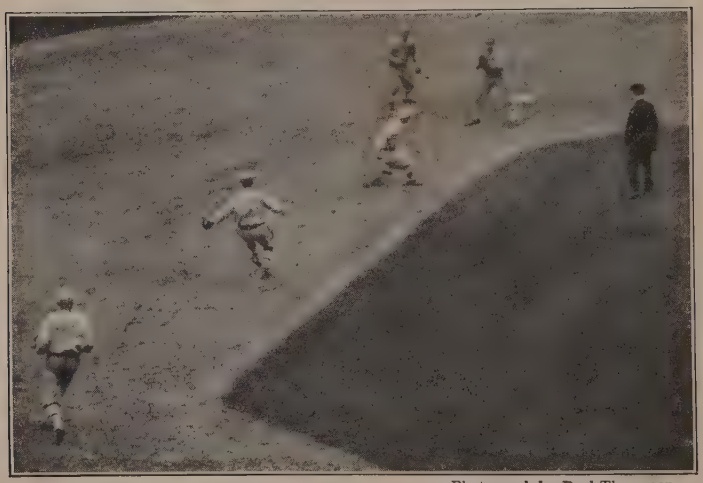
Fortunate, indeed, is the boy who has the right sort of coaching for his work in life. And he can usually get it if he is awake to his opportunities. Father, teachers, business men, the family doctor, can give from their experiences advice that will enable him to determine the position for which he should go into training.

In choosing a vocation a very important factor is,

of course, the money return. A boy often has the choice of two places. One gives small pay for the first few years, but in the end, if he is successful, promises a large salary. The other pays two or three times as much at the start, but there is little likelihood that it will ever lead to anything better. Again, there are lines of work in which the pay is good, but the nature of the business is such that it soon wears a man out; just as in professional base-ball the pitcher with the big reputation and the fat salary usually has to go back to the "minors," or is forced out of the game altogether, long before the good fielder ceases to draw his regular check in the major league. If one can fill two positions in life about equally well, the question to be decided is whether a large early salary makes up for the fewer years one can draw it.

On the ball field we are forever having it dinned into us that we should perfect our team play. The fellow who is constantly going after an individual record soon becomes unpopular with both players and "fans." It is the one who is willing to work for the good of the team, even if he has to pass by chances to better his own average, who is worth while in the game.

In life, too, there are many chances to gain something for ourselves at the expense of others; but when choosing an occupation we should consider what its influence will be upon the lives of the community. If it is a business the very nature of which must make it work harm to others, we should pass it by,



Photograph by Paul Thompson

Caught between second and third base. Good team work in baseball as in the game of life counts much for victory

even though we are sure to make money at it. Luckily, we are so constituted that we are not obliged to go into any work that will not make for good team play.

The number and variety of positions to be filled on the team of life are constantly growing. Every new discovery, every new improvement, creates a new want. The extended use of the telephone calls for an ever-increasing army of workers, both men and women. The installation of the wireless telegraph means the employment of a new and distinct class of operators. Think how the automobile industry has recently developed! Your own father, when a boy, never heard of a chauffeur, yet you not only know what the word means, but, quite likely,

hope some day to be one, and to drive a purring, snorting, high-powered car. Never was there a time when there was such a varied assortment of occupations from which to choose one suited to our peculiar likings and abilities as right now.

And how shall we qualify? By attending to duties that lie at hand. By forming right habits. By learning to use the experience of others, and so avoid things that have proved harmful to them, even though we cannot see how they can injure us. If we follow this line of training, when school is over and the umpire calls "Play ball," we can take our places in business or professional life trained and equipped to play the game with honor and success.

TO LABOR

CHARLOTTE PERKINS GILMAN

Shall you complain who feed the world?
Who clothe the world?
Who house the world?
Shall you complain, who are the world,
Of what the world may do?
As from this hour
You use your power
The world must follow you.

The world's life hangs on your right hand!
Your strong right hand!
Your skilled right hand!
You hold the whole world in your hand.

See to it what you do!
Or dark or light,
Or wrong or right,
The world is made by you!

A railroad accident that wrecked the train on which rode young George Westinghouse set the alert inventor's brain to thinking how such accidents could be averted. As he watched the train crews struggling with the inefficient hand-brakes, the idea flashed into his mind: "If there were only some way by which the engineer could brake the train!"

For months he thought of little else except this question, but the solution seemed as far away as ever. One hot day, as he was sitting at his desk, a little girl timidly approached him with a request that he subscribe to a magazine. Busy and absorbed, but incapable of speaking roughly to a child, he bought a copy, and turned back to his work.

But the end of his task was at hand, for in the magazine at his elbow lay the phrase that was to solve the problem of the air-brake. His model had been completed, but the operating power was unsatisfactory. Idly turning the pages of the magazine, Westinghouse saw an account of tunnel-building in which the work was done by compressed air. In a flash he had found the solution of his problem.

The inventor realized his debt to the little agent, and tried hard to find her. But he never saw her again. Her work was done.

OUT-OF-DOOR OCCUPATIONS

THE NEW AMERICAN FARMER

HERBERT N. CASSON

If the American farmer were to go out of business this year he would have to sell his farm on credit, for there is not money enough in the whole world to pay him half his price of thirty thousand million dollars.

We talk of money-mad trusts; but when we remember that the American farmer earns enough in seventeen days to buy out Standard Oil, and enough in fifty days to purchase the Steel Trust, the story of the trusts seems like "the short and simple annals of the poor."

One American harvest would buy the kingdom of Belgium; two would buy Italy; three would buy Austria-Hungary, and five would take Russia from the Czar.

With the setting of every sun, the money box of the American farmer bulges with the weight of twenty-four new millions. Place your finger on the pulse of your wrist and count the heartbeats — one—two—three—four. With every four of these quick throbs, day and night, a thousand dollars clatters into the gold bin of the American farmer.

Such is our New Farmer—a man for whom there is no name in any language. Instead of being an ignorant hoeman in a barnyard world, he gets the news by daily mail and telephone. Instead of

being a moneyless peasant, he pays the year's interest on his mortgage with the earnings of a week. Even this is less of an expense than it seems, for he borrows the money from his own banks, and he spends the bulk of the tax money around his own properties.

The new farmer is in business, not simply working for a living. He is a commercialist,—a man of the twentieth century. He works as hard as the old farmer, but in a higher way. He uses the four *m's*—mind, money, machinery, and muscle. His hermit days are over; he is a man among men. The railway, the trolley, the top buggy, and the automobile have transformed him into a suburbanite. In fact, his business has become so complex and many-sided that he touches civilization at more points and lives a larger life than he would if he were one of the atoms of a crowded city.

Photograph by Eugene J. Hall

This prosperous Wisconsin dairy farm is evidence that the New American Farmer is engaged in a paying business, not simply working for a living

Photograph by Eugene J. Hall

The owner of such a farm, the brain-working farmer, is the man behind prosperity

All farmers, of course, are not of this type. The country, like the city, has its slums. But the brain-working farmer is the man behind prosperity. That is the big fact of recent American history.

The best friend of the farmer has been the maker of farm machinery—and four fifths of the "harvester kings" were themselves farmers' sons. There are no two men more closely linked together by ties of blood and business than the farmer and the man who makes his labor-saving tools. Jethro Wood was a wealthy Quaker farmer of New York. The late James Oliver, the "plow king" of Indiana, and David Bradley, one of his greatest competitors, were both born and bred near the furrowed soil.

Photograph by Eugene J. Hall

Machinery has transformed the life and work of the farmer, eliminating much of the drudgery and producing greater wealth

McCormick built his first reaper in a barnyard, and the man who owned the first reaper factories, David S. Morgan, grew up amid the stumps of a New York farm. It was out in the wheat fields that the idea of a self-binder flashed upon the brain of John F. Appleby. There, also, Jacob Miller learned to improve the thresher, George Easterly to build the header, and Joseph F. Glidden to invent barbed wire.

To-day, farming is not drudgery. Rather it is a race—an exciting rivalry between different states. For years Illinois and Iowa have run neck and neck in the raising of corn and oats. Kansas now

carries the blue ribbon for wheat, with North Dakota breathless in second place; Minnesota has shot to the front in the barley race; Louisiana and Texas lead in the production of rice; Kentucky is the tobacco champion; New York holds the record for hay, and Michigan for potatoes.

In Iowa alone there are twenty thousand women and three hundred thousand men who have made farming a profession. They are producing wealth

Photograph by Eugene J. Hall

The value of one year's corn crop in Iowa would build three New York subways

at the rate of five hundred million dollars a year—nearly sixteen hundred dollars apiece. How? By throwing the drudgery upon machines. Iowa is not so large as little England, yet with her hog money alone she could pay the salaries of all the monarchs of Europe, and with one year's corn crop she could build three New York subways.

When the Indians sold Iowa to Uncle Sam they got about eight cents an acre. To give the price exactly, it was $2,877,574.87. There were statesmen who protested that it was too much, yet this amount was less than one quarter of the value of the eggs in last year's nests. Every three months the Iowa hen pays for Iowa.

Iowa is not an exceptional state. A traveler hears the same story—from oxcart to automobile—in almost every region of the Prairie West. The various states are only patches of one vast grassy plain, where

> Painted harvesters, fleet after fleet,
> Like yachts, career through seas of waving wheat.

All this amazing progress is by no means the best that the new farmer will do. It is merely what he has already done by the aid of machinery. What he will do hereafter by the aid of science remains to be seen.

—From *Review of Reviews*

When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization.

—*Daniel Webster*

FARMER JOHN

JOHN T. TROWBRIDGE

Home from his journey Farmer John
  Arrived this morning, safe and sound.
His black coat off, and his old clothes on,
"Now I'm myself!" says Farmer John;
  And he thinks, "I'll look around."
Up leaps the dog: "Get down, you pup!
Are you so glad you would eat me up?"
The old cow lows at the gate, to greet him;
The horses prick up their ears, to meet him:
        "Well, well, old Bay!
        Ha, ha, old Gray!
Do you get good feed when I am away?

"You have n't a rib!" says Farmer John;
  "The cattle are looking round and sleek;
The colt is going to be a roan,
And a beauty too: how he has grown!
  We'll wean the calf next week."
Says Farmer John, "When I've been off,
To call you again about the trough,
And watch you, and pet you, while you drink,
Is a greater comfort than you can think!"
        And he pats old Bay,
        And he slaps old Gray;—
"Ah, this is the comfort of going away!

"For, after all," says Farmer John,
  "The best of a journey is getting home.

I've seen great sights; but would I give
This spot, and the peaceful life I live,
  For all their Paris and Rome?
These hills for the city's stifled air,
And big hotels all bustle and glare,
Land all houses, and roads all stones,
That deafen your ears and batter your bones?
        Would you, old Bay?
        Would you, old Gray?
That's what one gets by going away!

"There Money is king," says Farmer John;
  "And Fashion is queen; and it's mighty queer
To see how sometimes, while the man
Is raking and scraping all he can,
  The wife spends, every year,
Enough, you would think, for a score of wives,
To keep them in luxury all their lives!
The town is a perfect Babylon
To a quiet chap," says Farmer John.
        "You see, old Bay,—
        You see, old Gray,—
I'm wiser than when I went away.

"I've found out this," says Farmer John,—
  "That happiness is not bought and sold,
And clutched in a life of waste and hurry,
In nights of pleasure and days of worry;
  And wealth is n't all in gold,
Mortgage and stocks and ten per cent,—

But in simple ways, and sweet content,
Few wants, pure hopes, and noble ends,
Some land to till, and a few good friends,
Like you, old Bay,
And you, old Gray!
That's what I've learned by going away."

And a happy man is Farmer John,—
Oh, a rich and happy man is he!
He sees the peas and pumpkins growing,
The corn in tassel, the buckwheat blowing,
And fruit on vine and tree;
The large, kind oxen look their thanks
As he rubs their foreheads and strokes their flanks;
The doves light round him, and strut and coo.
Says Farmer John, "I'll take you too,—
And you, old Bay,
And you, old Gray,
Next time I travel so far away!"

THE AVERAGE MAN

JOSEPH E. WING

Thomas Jones was in no way a remarkable boy. He was slender, long-legged, brown, and carried in his face the ruddy tints of health left there by the sun and wind of the great outdoors. There was a merry twinkle to his eye, a sweet and gentle curve to his sensitive mouth. He was a friendly soul who had many comrades—schoolfellows, harvest hands, threshermen, neighbors' sons.

Every one liked the boy, he was so gentle, so impulsive, so winning, although they had many occasions to chide him for his carelessness. His thrifty father frowned when Tom spent for a new gun every cent he had earned by cutting corn. The elder brothers grumbled because he loved to hunt, trap, and fish, and would often leave tasks undone to slip afield with dog and gun. The sisters complained when Tom forgot to wash the buggy, curry the driving mare, pump water for the bathroom, or when he whistled shrilly in the house to call in his dogs to make tracks on the smoothly polished floors.

You see, do you not, that Tom Jones was just an average boy?

There were many things he would have loved to know, but he did not see that any of these were taught in schools. He would have been glad to learn how the wild goose knew what weather was coming; how it knew that there were great silent, lonely lakes in the Far North, where it might lay its eggs and raise its young, undisturbed. He would have been glad to know how the mother quail taught her young to hide in the grass at her one sharp-called command; what his dog thought of when he stood with his head resting on the boy's knee, looking up longingly into his young master's face.

He would have liked to know why the old cow hides her calf in the tall weeds when it is newborn, and how the little thing understands and remains

hidden till she comes again; how the wild grape finds its way to the tall treetop; how the clover seed, deep-buried, lies patiently sleeping till its time to be raised to the surface comes. These things seemed worth while to him.

Had he but known it, all the things that most interested him were taught in books, in schools; there was a world of delight for him there, exploring in the realms of soils and plants, in bird and animal life. He would have been a fine student in an agricultural college, had he but known of it; but no one told him this, so he lived his own life, studying these things as best he could and guessing shrewdly at the answers.

Only the mother knew and understood the boy. How could she understand, she who had never in her life tasted the joy of tramping through tall, wet grass after wild ducks—this mother who had never spared herself or snatched a joy at the price of leaving work undone? God knows how the mother knew. It is because He knows all things by being all things, and it is the God-spirit in the world that pervades motherhood. You see it in the wild mothers—the quail, the wild deer, all wild things. Mothers know.

There was the blood of vikings, of crusaders, of cavaliers, in Tom's veins. He could not be satisfied with living easy, eating, sleeping, and wearing clothes. His call was to be doing. That was why he liked so well to break colts or to drive a good horse. That was why he loved to cut corn, for

one could use all the strength he had, all the endurance, and much skill.

So the days went by. They lengthened to weeks, and the weeks grew into years. Tom became a man in stature, and began to take a regular place in the work of the farm.

As Tom's father grew old he learned to lean more and more upon the young man. Those were happy days for Tom because he had come into the new strength of a well-nigh perfect manhood. He loved the farm work, and no one of the men could outdo him in pitching hay or digging a ditch. He had a splendid body, and he kept it clean and strong within and without. This was the glorious time of life when one feels that it is a wonderful thing to be alive and to be a part of the great and beautiful world.

Tom had not known much about his father's fortunes, and when the father suddenly passed away he was amazed to find the farm burdened with heavy debt. Mightily he buckled to the work. The debt must be paid, and then the farm must be made to pay its way. The smiling mouth developed new lines of decision and purpose. The laugh still came, and the merry light still kindled in the brown eyes, yet when not observed the man's face settled into a gravity that was half sternness. He was fighting now—fighting for the old home.

This is the story of the average man. I knew him when he was a boy, and loved him well. I watched his struggles in early manhood. I have

watched him since. The debt is paid. The farm is built as he desired — almost.

Why have I written this story? To ask myself, after I had it truthfully set down, if there is anything of poetry, of romance, of fine endeavor in the corn belt. Can a man be a hero and cut corn? Can he fill his life with sweetness and strength, and feed cattle? You who believe that only in wars and tumults can one find heroism are mistaken. You have not known the man in the corn belt. You have not known the average man.

—From *Breeder's Gazette*

THE CORN SONG

JOHN G. WHITTIER

Heap high the farmer's wintry hoard!
  Heap high the golden corn!
No richer gift has autumn poured
  From out her lavish horn!

Let other lands, exulting, glean
  The apple from the pine,
The orange from its glossy green,
  The cluster from the vine;

We better love the hardy gift
  Our rugged vales bestow,
To cheer us when the storm shall drift
  Our harvest fields with snow.

Through vales of grass and meads of flowers
  Our plows their furrows made,
While on the hills the sun and showers
  Of changeful April played.

We dropped the seed o'er hill and plain
  Beneath the sun of May,
And frightened from our sprouting grain
  The robber crows away.

All through the long, bright days of June
  Its leaves grew green and fair,
And waved in hot midsummer's noon
  Its soft and yellow hair.

And now, with autumn's moonlit eves,
  Its harvest time has come,
We pluck away the frosted leaves,
  And bear the treasure home.

There, richer than the fabled gift
  Apollo showered of old,
Fair hands the broken grain shall sift,
  And knead its meal of gold.

Let vapid idlers loll in silk
  Around their costly board;
Give us the bowl of samp and milk,
  By homespun beauty poured!

Where'er the wide old kitchen hearth
  Sends up its smoky curls,
Who will not thank the kindly earth,
  And bless our farmer girls!

Then shame on all the proud and vain,
  Whose folly laughs to scorn
The blessing of our hardy grain,
  Our wealth of golden corn!

Let earth withhold her goodly root,
  Let mildew blight the rye,
Give to the worm the orchard's fruit,
  The wheat field to the fly:

But let the good old crop adorn
  The hills our fathers trod;
Still let us, for his golden corn,
  Send up our thanks to God!

WITH A FORESTRY CREW

JOHN CLAIR MINOT

Going deep into the big woods is something that appeals strongly to boys—or to almost anybody else, for that matter. The modern profession of forestry has opened the way for hundreds of young men to engage in attractive and remunerative work in the open, not only for those who become professional foresters but also for a small army of others who pass the summer months as members of parties doing scientific forestry work in the lumbering regions.

The old-time "timber cruisers" whom the lumbermen used to employ to travel over the region to be cut and guess at the probable yield are passing.

Courtesy of Forest Service, Washington, D.C.

Making a valuation survey. The forestry service means a life in the open of irresistible attraction to the vigorous, liberty-loving youth

These "cruisers," or "explorers," were woodsmen of long experience, and it is to be said to their credit that their estimates were often amazingly accurate. With a blanket and an ax, one of them would travel for days, making no measurements, drawing no maps, writing down no figures, but mentally comparing the stand of timber with others he had known, and noting carefully the difficulties which lay between it and the nearest drivable stream.

Then he would return to his employer, who would base his calculations and arrange his plans according

to the report made. This was the method in the great lumber regions of northern New England until a few years ago, but at the best it was only guesswork. Modern conditions demand greater accuracy and more attention to detail, for there has to be closer financial figuring than a generation ago, and scientific forestry also means less waste and a conservation of the future supply.

Now if a man owns a township in the vast domain of King Spruce, or buys the stumpage on such a tract —Maine leads all the states of the Union in spruce lumbering, and ranks as one of the first half-dozen in pine, hemlock, fir, and birch, although the giant first-growth pines which gave the state its popular name are gone—he engages a professional, college-trained forester to supply him with detailed information. This expert takes a party of a dozen to twenty assistants, and they proceed to the township in question, where they spend a month or six weeks in surveying, tracing maps, making photographs, tabulating measurements, and so forth, and the cost of their work is a most profitable investment for their employer.

The members of these forestry parties are drawn in part from the various forestry schools, but they always contain other college boys who are eager for an opportunity to spend the summer in the northern wilderness, and who are not afraid to rough it when occasion requires. With them there are also expert woodsmen for the heavier work, and last, but not least, the cook and his assistant, for the culinary department is one of importance.

The township contains about twenty-three thousand acres, and the main camp is pitched as near its center as good water is to be found. Usually, the camp consists of several good-sized tents, although occasionally an abandoned lumber camp is found, which is patched up and used as headquarters. Frequently small parties are away from this main camp for two or three days at a time, and during such trips the boys live upon food taken along in a pack, and sleep at night rolled in blankets beside the fire.

The work is carried on by two or three crews of four or five men each, all under the immediate direction of the expert in command of the party. The boundary lines of the township are accurately determined—it is six miles on each of the four sides—and the corners marked by cedar posts.

Along the boundary lines, mile stations are established, also marked by cedar posts, which are numbered. From these posts lines are run across the township, being marked by blazed or spotted trees, and at the intersection of the lines more posts are set up.

When the whole township is thus divided into mile blocks, each of the thirty-six blocks is carefully traversed and mapped, photographs taken of the different stands of timber, enough trees measured to give a basis for a good estimate of the whole, streams and relative elevations carefully noted, and every detail considered which would affect the cutting, hauling, yarding, and driving of the logs. On rainy days in camp the field notes are written

out, the finishing touches put on the maps, and the tabulations and calculations made.

When that township is finished there is probably another one to begin upon, and such a party will cover three, or perhaps four, in the summer and early fall, or close to one hundred thousand acres of timber land. It is, on the whole, a strenuous summer for the college boys of the party, for there is much tramping, and some places are hard to struggle through.

But if the bed is hard, the sleep is always sound; if the fare is coarse, it is eaten with a relish. It is a wholesome life, and in the fall every member of the party is in superb physical condition.

Nor is it all hard work. There are fishing and swimming in the lakes and streams, an occasional adventure to enliven things, a forest fire to fight, a new knowledge of nature and of the many creatures of the wilderness, and the frequent sports and frolics that are inevitable when a company of young men are living in the open air.

When a party comes upon a deserted lumber camp, dilapidated and in ruins, there is a rare opportunity to study the bird and animal life of the woods. For some reason, probably the "man smell" of the place, bears, raccoons, and foxes are shy of such camps, but almost everything else that flies or walks or crawls in the forest appears to rejoice in it as a ready-made home. Porcupines, woodchucks, and hares burrow under its flooring of poles, and if it is near a stream there are likely

to be muskrats, minks, and perhaps an otter. Squirrels, weasels, and mice are sure to be there, and of the feathered creatures, the woodpecker, blue jay, chickadee, nuthatch, swallow, and sparrow; and, less commonly, the hawk and owl make their headquarters in and about it. Such an old camp in the early summer presents an amusing "Happy Family" picture.

One summer a year or two ago a small party, on a two days' trip from the main camp, spent the night in an abandoned lumber camp that was still in good enough condition to afford shelter from a shower that came up. In poking round, one of the boys dropped a lighted match into a barrel that stood in one corner. The contents at once blazed up with a peculiar flame, and, to the great mystification of all, burned steadily for several hours, finally involving the old camp itself in the conflagration. Later, they learned that the barrel had been partly filled with fir balsam. It represented the labor of weeks, perhaps a season, by some patient picker, and had been stored there for some reason, instead of being shipped to the drug market, where it commands a handsome price.

Such incidents vary the monotony of work with the ax, compass, surveyor's chain, calipers, barometer, camera, and notebook. And when September or October comes, it is a healthy and happy party of muscular and bronze-visaged young men who leave the big woods behind, and return again to the life of civilization.—From *The Youth's Companion*

THE BOY WHO WAS "DIFFERENT"

WALTER E. ANDREWS

"I want to talk with you about that nephew of yours, William," said Mrs. Waddle to her husband.

Mr. Waddle laid down his newspaper and said, "Well?"

"Dick will be seventeen years old next month."

" 'T is n't his fault, Mandy."

"He's getting to be a young man," Mrs. Waddle declared, paying no attention to this pleasantry. "He's had a good schooling, and he's smart and healthy. It's time he quit this foolishness of puttering with peach trees; and it's time you quit backing him up in it."

"Me?"

"It ain't anybody else. You rented him that five-acre lot, and gave him the option of buying it at the end of six years, did n't you? And you lent him forty dollars to buy trees with. And you told him that he could use your team and tools."

Mr. Waddle shuffled his feet uneasily on the porch steps. He looked uncomfortable—and guilty.

"You're Dick's uncle," continued his wife. "He's alone in the world, and you're responsible for his bringing up. You ought to squelch his peculiar notions, and make him do as other boys of his age do."

"Maybe so. Maybe."

"Other boys hire out as farm hands or clerk in stores, or do something else that's fitting to their age. They don't have queer notions about getting land, and planting trees, and doing things different, and being 'independent.'"

"Dick's *different*, that's all," said Mr. Waddle. "He's paying his board, is n't he?"

"Yes."

"He buys his clothes, does n't he?"

"Yes—lately."

"He's a good, honest boy?"

"Yes, yes."

"He's the best strawberry picker and the smartest peach packer in the neighborhood?"

"I suppose so."

"Then suppose we let him alone. It may be he'll surprise us all before he's many years older."

Richard Russell certainly was "different." Mr. and Mrs. Waddle were not the only ones who said it. The schoolmaster said it, and the Peachville neighbors unanimously affirmed it. His "oddness" asserted itself in many ways that "went contrary" to the settled notions of the good Michiganders of Peachville township.

People liked Dick, but they distrusted his "oddness." They admired his frank, honest face, his fidelity to his word, his industry, and his cheerfulness; but they could not quite forgive the fact that he "was n't just like the other boys." Fruit farmers liked to hire him by the day at picking time because of his deft and conscientious work; but they

shook their heads doubtfully when he ventured to suggest some improvement here, some change there, that, in his opinion, would either facilitate the work or render the result more certain.

"Why," said Deacon Pepperton one day to Hank Peters, confidentially, "what do you suppose that Russell fellow wanted me to do last week? He wanted me to let him build a machine that would sort peaches into four different sizes! He called the thing a 'grader,' and said he'd seen a picture of one in some farm paper."

"Did you let him?"

"Me? No, siree! I was n't going to have *my* peaches spoiled by being run through the hopper of a machine. The idea!"

Then Hank Peters told, with many wags of the head, how Richard Russell had once suggested the making of a basket turntable in the peach-packing shed.

"Sounds just like him!" remarked the deacon. "What did he say the thing would do if he *did* make it?"

"That it would save work and time," answered Hank, disdainfully. "He was working for me that day, fastening on covers, and—as you know—as soon as one end is fastened, the basket must be lifted up and turned round so that you can get at it to fasten the other end. Well, he worked away an hour or so. Then all of a sudden he said, 'Mr. Peters, I could whittle out a board the size of a basket bottom, nail an edge round the board to

hold the basket in place, and mount the board on a pivot so that it would swing just even with the top of the packing table.'

"'I suppose you could,' said I. 'What of it?'

"'Why,' he said, 'it would save lifting the basket. All I'd have to do would be to set the basket on the pivot board, fasten one end of the cover, swing her round—so—and there'd be the other end ready for fastening.'

"'Young man,' I said, 'I'm paying you a dollar and a quarter a day to *work*. Don't always be looking for easy jobs.'

"'I did n't mean it that way,' he answered. 'I was just trying to plan a way that would push the work faster.'

"'Much obliged,' I said, 'but I ain't paying wages to inventors *this* year.' And then he shut up."

The deacon laughed heartily at the story, and ventured to predict that William Waddle would have a time with that boy before he got through.

The peach trees in Richard's orchard had been planted three years. They had grown into thrifty, beautiful trees—the pride of Richard's heart and the delight of Richard's blue eyes. Each spring he plowed the land and pruned the branches. Every ten days throughout the season he harrowed the ground. He studied books on horticulture, subscribed to a horticultural paper, and kept his eyes and ears open for any information about practical peach culture.

At odd times he "worked out" for the neighbors

Photograph by Eugene J. Hall

Well-cultivated land means loaded trees, and loaded trees mean increased profits to the grower

by the day, thus earning enough money to pay the rent of his land and his living expenses. He refused several flattering offers to work by the month.

"I can't afford it," he said to one of the farmers who asked a reason for the refusal. "If I worked by the month I should have to neglect my trees, and it would n't be wise to do that."

The five-acre piece of land that Richard hoped some time to own was valued at seventy-five dollars an acre, and the rent that he had to pay his uncle was four dollars an acre. The piece lay back from the road, and there were no buildings on it; but the soil was well-drained, high, and sandy—ideal ground for peaches. It was bordered on three sides by prosperous orchards.

"If you should want more land," William Waddle had said, "you can have the front fifteen acres at the same figure. I'm keeping it for you."

"I'll pay for the five first," Richard had answered. He believed that if he could hold on until the trees were five years old, the first full crop would pay, or nearly pay, for the five acres.

Two years passed. Richard was nineteen. His trees were entering their fifth summer, and seemed to promise an excellent crop. When the trees blossomed in the spring the sight was like a vision of promise to the boy.

Early in that same spring Richard bought a spray pump, and at the proper time carefully sprayed all his peach trees. The neighbors laughed, and made jokes about the "squirt gun that would poison all the peaches." In those days the art of spraying fruit trees was in its infancy. Richard had read about it, and had written to the state agricultural experiment station for instructions, which he had carefully followed.

Even William Waddle looked dubiously at the squirt-gun experiments. "Better go slow," he said to Richard.

"But, uncle, the experiment station people are sure that spraying will prevent the leaf curl. And last year, you know, one third of the peach crop in this neighborhood was lost by that disease."

"Yes."

"It's an idea that seems worth trying."

"Maybe so. Maybe. I'm not saying anything myself, but your aunt is having seventeen fits!"

Later in the season the dreaded leaf curl attacked almost every peach orchard in the county. The leaves curled up into fantastic shapes, assumed strange colors, and finally dropped from the trees; then many tiny peaches followed the leaves. In Richard's orchard the damage was insignificant; in the orchards of his neighbors more than one half the crop was lost.

"Have you seen Dick Russell's orchard?" asked Mr. Peters one morning, when he met the deacon on the road.

"Yes. Have you?"

"Went through it yesterday."

There was an awkward pause. Then the deacon coughed. "It begins to look," he said, "as if that Russell fellow was n't such a—" He paused for a word, hesitated, and coughed again.

"Yes, it does look so," admitted Hank. "Well, I got to be going. Good morning, deacon! G'long, Bess! G'long!"

In early August, Richard bought ten dollars' worth of lumber, shingles, and nails, and built in his orchard a small, rough packing shed. Inside the shed he built a packing table, and on that table he put a swinging pivot board such as he had wished to make for Mr. Peters. He also made a rude peach grader—on the principle of an inclined double track with openings between the rails.

The openings were as narrow at the top as the

Photograph by Eugene J. Hall

The shipping package was then a close-sided, slat-covered basket and often small or unripe peaches were placed at the bottom

diameter of a small peach, and gradually became wider toward the bottom of the incline. The peaches, when poured into a hopper at the top of the tracks, rolled down and dropped through the openings at different stages of the journey, according to size. The small peaches dropped through first, then the medium size, then the large ones. Only the extra large peaches reached the basket at the bottom of the incline. The others fell into one of three canvas receptacles immediately beneath the tracks.

William Waddle whistled softly as he examined this contrivance. "Bruise them much?" he asked.

"Not unless they are picked overripe; and you know peaches should n't be picked that way."

In September the peach harvest began. But no one except Richard had more than half a crop.

Richard's trees were, as his uncle expressed it, "loaded." On hearing this statement, Mrs. Waddle sniffed disdainfully. "He'll spoil them all in that machine of his," she prophesied, "before he gets them sold."

"Maybe," said her husband.

When it came to packing the first peaches, Richard encountered an unlooked-for difficulty. The shipping package used in those days was a close-sided, slat-covered basket that held one fifth of a bushel. When packed, the buyer could see only the top layer of peaches. The custom among most growers, I regret to say, was to put little peaches in the bottom of the basket, medium-sized peaches in the middle, and big peaches on top.

Richard Russell objected to that custom; he said it was not honest. He proposed to pack each size by itself, and label the basket accordingly—"Fancy," "No. 1," "No. 2," or "No. 3."

The neighbors laughed at the plan; and they laughed at his grader. "You'll have your trouble for your pains," they said. "The buyers expect to find little peaches in the bottom of the baskets, and they won't believe that your baskets are any different from others."

"I'll label each basket, and guarantee it," maintained Richard.

"They won't believe you!"

"I'll make them."

His first shipment he graded carefully, labeled correctly, and consigned to a commission firm in

Chicago. A letter, explaining the system of packing, accompanied the shipment. Within two days the sales-account came back, with a check to balance the transaction.

It was a momentous occasion for Richard. That pink check represented the first tangible return from his orchard, the first encouragement after five years of planning, working, and hoping. How crisp the paper felt! How it seemed to rustle and crinkle with golden promises!

But when he came to figure the sales in detail and in comparison with the sales made by various peach growers in the neighborhood, he was greatly disappointed to find that he had averaged no more a basket than his neighbors had.

"Never mind, Dick," said his uncle, consolingly. "It might have been worse."

Richard made no reply. In his heart he felt that his method of packing peaches was the only correct, honest method, and that it was bound to win if—

Oh, that "if"! Richard sat down in his packing shed and pondered the matter. Picking up one of the peach baskets, he looked at it critically. Turning it over and over, he tried to put himself in a buyer's place, and to imagine how he would feel if he were purchasing hundreds of baskets of peaches from an unknown shipper.

"Should I have time to unpack and examine every basket?" he mused. "No, I 'm afraid I should n't. Should I be willing to trust a label or

a guarantee in a letter? Probably not! What should I do, then? Pay the shipper the average market price for mixed packing? Of course!"

Then he thought, "If I were going to pay a shipper an extra price for an extra product, I 'd want to see the fruit packed, or else I 'd want to see the bottom and middle layers of every basket after it was packed."

Seizing a knife, he slashed into one side of the basket in his hand and made a vertical opening about an inch and a half wide in the thin wood. Then, on the other side of the handle, he made a similar opening. Turning the basket round, he cut two corresponding openings in the opposite side.

"I 've got it!" he cried, joyfully, and swung the basket round his head as if it were a flag of victory. And sure enough, he had "got it." Experiment showed that peaches packed in such a basket could be as easily inspected underneath as on top; a buyer had only to look to be convinced. And—although Richard did not realize it at the time—the open-sided basket was destined to become the standard peach-shipping package of Michigan.

That evening Richard explained the idea to his uncle. William Waddle listened attentively, while his wife blew her nose suspiciously.

"Does n't it weaken the basket?" asked Mr. Waddle.

"Not perceptibly."

"Is n't it a lot of work to cut the slits?" demanded Mrs. Waddle.

"I can do a hundred baskets in forty minutes. I tried it this afternoon."

Mrs. Waddle laid down her knitting and looked at her husband. "William, how much do a hundred baskets cost?"

"About two dollars and a half."

"I hope you have n't spoiled two dollars and a half worth of baskets," said Mrs. Waddle.

The following morning Richard shipped one hundred baskets of graded peaches packed in the new baskets. He consigned the shipment to the same Chicago commission firm, and inclosed a brief letter of explanation.

In a few days he received a personal letter from the manager of the firm, complimenting him on his "unique, honest packing," and promising extra prices for all peaches thus graded and packed. Inclosed in the letter was a generous check, based on a rate considerably higher than the prevailing market price.

Richard, after supper that night, handed the letter to his uncle. William Waddle read it, winked one eye rapidly, and passed the letter to his wife. She took it gingerly, put on her glasses, and read it through. Then she resumed her knitting.

"Eh?" said Mr. Waddle, after a long pause.

"I did n't say anything," said Mrs. Waddle.

"Are you going to say anything?" her husband ventured to ask.

"No; nothing in particular." But later in the evening she said good night to Dick in a gentler tone than usual.

At the end of the peach season Dick's bankbook showed a balance of four hundred and fifty dollars to his credit. He felt like a millionaire. It was a happy moment for the boy when one morning he handed his uncle a check for three hundred and seventy-five dollars, in full payment for the five-acre piece of land.

"I 'm proud of you!" said Mr. Waddle. "I 'll have a deed made out at once."

Mrs. Waddle said not a word. But that same morning she made a big spicecake, frosted it carefully, and outlined on top, with raisins, a huge "D." At dinner Dick found the cake majestically reposing on his plate. He gave his aunt a quick look of surprise, but she seemed not to notice.

"Is it for me?" he asked, bewildered.

She nodded.

Getting up from the table, Dick kissed his aunt affectionately on the cheek.

"Shoo-o-o!" whistled William. Then, under his breath, he muttered, "I wonder whether that 'D' stands for 'Dick' or for 'Different'?"

—From *The Youth's Companion*

HOW JOHN MUIR BECAME AN EXPLORER

ADAPTED

As a little lad, John Muir lived in Dunbar in Scotland, on the shore of the stormy North Sea. By the time he was six years old, whenever there was no school and no work to do at home he used

Photograph by King Print Co.

Two great naturalists, John Muir and John Burroughs, whose love of outdoors made life a long, glorious exploring trip

to wander off with other playmates as wild as himself, to hear the birds sing, to pick up shells and seaweed on the shore, to look for eels and crabs in the salt pools, or to watch the great waves as they came thundering in against the black crag on which stands the ruin of the old Dunbar Castle.

As the lad grew older he made longer excursions. Often, in the crisp bright days of autumn, an entire neighborhood of tough little Scots would start from home, and running steadily hour after hour, would cover ten and twenty miles in an afternoon.

One night after the mother had tucked away

John and his younger brother David in their old-fashioned curtained bed in their little attic room, the wind made such a howling that the boys could not sleep. So after lying long awake, they got up, and found amusement by letting themselves out the window and hanging by one hand from the sill, while the cold wind made balloons of their night clothes. Not satisfied with that, they climbed up the steep slate roof, creeping along by the slightest finger holds, until they were astride the ridge pole. And when they had enough of this, they slid down the roof, caught the sill of their window as they shot by, and pulled themselves into safety.

Years later, after John Muir had become a famous explorer, and many a time risked his neck on the peaks and precipices of the great mountains of the world, he came back to Scotland, went to his old house, and tried again this night adventure of his boyhood. But he found that what he had done in his daring youth was now beyond his skill.

In these various ways, John Muir both came to love the out-of-door world and built up the great bodily strength and endurance, the self-reliance and courage, which he needed in his life work.

In his school reader were stories of adventure, accounts of strange animals and new countries. Even more interesting to him were the descriptions in his school geography, especially whatever had to do with America. To the Scotch lad it seemed equally marvelous that men should dig gold out of the earth and get sugar from the sap of a maple tree.

One evening when the two boys were sitting by their grandfather's fireside, busy with their usual evening lessons, their father entered with the most wonderful news that two wild boys ever heard.

"Bairns," he said," you needna learn your lessons the nicht, for we're gan to America the morn!"

The family joined a party of emigrants, sailed to New York, and from there went into what was then the Wisconsin wilderness. They chose a tract of fertile land, with sunny woods and open meadows, and best of all, in the boys' opinion, a beautiful lake and a small river. Here they built a little cabin of oak logs, cleared the land, and started crops.

Everything was new, wonderful, and adventurous. The first time that John saw a meadow sparkling with lightning bugs on a summer night, he would not believe his eyes, but thought he must have been hit on the head and was "seeing stars." The real stars, also, were far brighter than in stormy Scotland, while besides these there were the glorious auroras of the winter nights.

Wild strawberries, huckleberries, cranberries, hazelnuts, hickory nuts, and maple sugar were all new to these boys from the Old World. They had never even had the chance to go swimming in warm, quiet water, and had to learn to swim after they came to America. After a while, John became so skillful that he could keep afloat all day, and used to go off on exploring trips along the lake shore, swimming steadily for hours at a time.

Afterwards, John Muir went to the university and

Tillotson & Torrell

John Muir teaching a nature class in the Yosemite

studied to be an engineer. But he loved outdoors too much to shut himself into an office. So he took the outside end of the business, and left the inside to other, less hardy men. His work was to map unknown country, to hunt through mountains and wilderness for the best places to run highways and railway lines, to look for signs of mineral wealth so that mines might be opened.

This employment took him into all parts of the world, but chiefly into the less known parts of our own West, and into Alaska. The great Muir Glacier on the Alaskan coast is named for him. Sometimes he traveled with one or two white

companions in canoes paddled by Indians; sometimes he went alone with no company but a dog and a laden mule. He lived so much in the wilderness that his sense of direction became like that of a wild animal; so that, no matter where he went, in darkness or fog or thick woods, he never had the least fear of getting lost.

He never thought of this as being the hard toil that it really was. He had begun to run about the country as a boy, to climb house roofs and the ruins of Dunbar Castle, and to "endure hardness like a good soldier." He had toughened himself with long hours of heavy farm work in the Wisconsin wilderness. He had studied hard to prepare himself for his work. Then, having made ready, as he himself has expressed it, "I wandered off on a glorious exploring trip, which has lasted fifty years and is not yet completed."

THE MAN WHO NAMED MOUNT WHITNEY

EDWIN T. BREWSTER

Every one who has studied geography is supposed to know that Mt. Whitney is the highest peak in the "continuous" United States. Fourteen thousand five hundred feet it towers above sea level, the loftiest point of land between the great volcanoes of Mexico and the snow-clad peaks of Alaska.

The man who discovered Mt. Whitney, and by right of discovery gave it its name, is a striking

example of a youth of twenty who did not in the least know what he wanted to do for a living, stumbled across a suitable vocation, and went on with it to the very highest success.

He was a city-bred boy, Clarence King by name, who was a man grown and a graduate from an engineering college almost before he had ever been off paved streets. But he had leisure, money, and much thirst for adventure; and so, the summer after he left the scientific school, and just by way of a lark, he started for California.

This was in the sixties, before the days of railroads in the West, and the only way to get overland was to join an emigrant train and take one's chances of being scalped by Indians on the way. King's train got as far as Nevada, and came to grief. But he, with two other young fellows, kept on across the mountains on foot.

On their way down from Virginia City, just by the purest chance, they ran across a party of surveyors who were exploring and mapping a country which was then virtually unknown except to a few hunters and miners. Oddly enough, the chief of the party turned out to be one of King's old college teachers. He had been locating mountains in the Sierra Nevada until he had worn down his party to a single packer. Would King take a hand for his board? — the professor reckoned he would not be worth any more. Why, yes, the thing looked amusing. Why not practice what he had been taught at school?

Courtesy of U.S. Geological Survey

CLARENCE KING

A man whose thirst for adventure and love for the freedom of outdoor life led to great achievements

King took to mountaineering life like a duck to water. He could climb any surface to which human fingers and toes could cling, while the immediate prospect of breaking his neck seemed never to trouble him in the least. So he stayed on, and became a permanent member of the Survey.

There were twenty or thirty surveyors in all, besides the packers and drivers and cooks and camp assistants. They went out in small parties, half a dozen together, and their work was to explore the country, study the rocks, the minerals, the forests, and the wild animals, and finally to make an accurate plan of the country so the state of California might know what it had within its borders. In two years this old California Geological Survey added to the known area of the United States a region as large as Massachusetts and as high as Switzerland.

Many of these surveyors were, like Clarence King, young fellows just out of college. They tramped the forests, and they climbed the mountains. When one of them discovered a new peak, he was as likely as not to name it after some other member of his party or after one of his college teachers or the author of some textbook which he had just left off studying. To this day, any one who looks over the map of California will find that these great twelve-and thirteen-thousand-foot peaks nearly all bear the names of men. Every member of the Survey has some monument. Mt. Brewer is named for the man whom King encountered on his way from Virginia City. The lovely Lake Eleanor

in the famous Hetch-Hetchy Valley is called after "the little girl daughter" of one of the older men.

The next year after King joined the Survey, he was sent up through what is now the Yosemite Park into the great knot of mountains beyond. The party made its way as far as Mt. Brewer—and there they stopped. On the other side of the crest, cut like a great gash in the earth, lay the cañon of King's River.

But across the cañon towered a new mountain, one of the highest in the range—and orders were to measure all important heights. So King and one other man, the next best climber of the party, lowered themselves on a lasso over the precipice, trusting Fate to get them up again. They made their way along a knife-like ridge, camped above twelve thousand feet on the bare granite without fire, ate their food frozen, and risked their lives a dozen times a day. But they climbed their mountain, and named it Tyndall, after a famous English man of science who had climbed in the Alps.

From the top of Tyndall, looking still farther into the wilderness of mountains, they descried another still loftier peak. This they called Mt. Whitney, after the head of the California Survey, whose name they had been saving for something worth while. That is how the highest peak in the United States came to be named.

It was not, however, until long afterwards that anybody knew how high it is. King tried in vain to climb it on this trip. Later he tried again and failed, and it was not until nine years afterwards that

Courtesy of U. S. Geological Survey

Mapping out unexplored regions has a fascination for hardy, self-reliant, adventurous men who love the great out-of-doors

another mountaineer ascended from the other side.

Meantime King and his companion, after great hardships, managed to get back safely to the main party. But it took them about a week to cover some twenty miles.

After this experience, King adopted geological surveying for his life work. When he had finished with California he went down into Arizona. There the Apaches captured the whole party, tied them to stakes, and were just on the point of burning them, when a company of United States troopers appeared and gave the Indians something else to think about.

King did so well in Arizona that when he was barely twenty-five Congress set him at work studying the line of the proposed Pacific Railroad, at the head of what is called the Fortieth Parallel Survey. This was a very famous piece of work in its day. It lasted ten years, and mapped in more than eighty thousand square miles of country, in a broad strip a hundred miles wide, from the east base of the Sierra Nevada around Great Salt Lake and as far east as Denver.

After that, King was made first head of the United States Geological Survey, though even then he was only thirty-seven. All the exploring and mapping and searching for precious metals and oil that was done by the government anywhere was under his charge. He was the man who decided that the great western highland of the American continent should be called the Cordilleran; and he laid the foundation for the great inch-to-a-mile map on which the government has been at work for more than twenty years and has not yet half finished.

Was it all luck that Clarence King found his work, and became in his own field perhaps the most

Courtesy of U. S. Geological Survey.

A party of surveyors at work on a mountain side. There is still plenty of this kind of work, for hardy, self-reliant men

eminent man in the entire world? Probably not. He was an able and well-trained man, and he was watching sharply for his particular niche in the world's work. He was late in finding his chance—but he knew when his call came.

There is plenty of work left for men of his sort even in our own country. South America, Africa, China are still to be provided with highways, railroads, and bridges; portions of them are hardly yet explored or mapped. There was never a time when a hardy, adventurous, self-reliant man, trained to almost any useful profession, has found greater opportunity "in the ends of all the earth."

TRAPPED BY THE WIRE

ALBERT W. TOLMAN

"Diving," said Adam Kerwin, manager of the Dirigo Wrecking Company, "is a mighty ticklish business. A diver can't have too many brains, for he's got to look out all the time and not get nipped. Above all, it 's a careful man's job. The risky fellows don't last very long. By and by they take one chance too many, and either don't get out at all, or, if they do, they 're so frightened that their nerve is gone, and they 're never any good again. Yet sometimes even a careful man is liable to be caught.

"In October, 1891, a telegram called me east of Mount Desert, to save what I could from the German iron ship, *Bremerhaven*, which had been wrecked on a group of ledges called the Burying Ground, not far from Cutler. She had come across to St. John for a cargo of spool wood, and her captain had mistaken his bearings on a foggy morning, and run in too near.

"I reached the spot just as a fall gale was making up. Among divers it had a bad name, for it was a jumble of peaked rocks, some close to the surface, others far below, crisscrossed with valleys through which ran strong submarine currents, varying with the rise and fall of a fifteen-foot tide.

"The swell, heaving across the nubbles, made a heavy surf in spots. Fortunately, however, the

ship lay in a calm aisle between two reefs in about eight fathoms; so I expected to be able to strip her without very much trouble.

"A diver's time runs into money fast. The tide was falling, and I wanted to do everything I could before it got too rough to work. So I hurried on my togs.

"The captain and part owner, a Hamburger by the name of Julius Schermerhorn, was there, too. What he cared for particularly was a small safe in his cabin, containing all his papers and money; that meant a good deal to him for the sake of several little Hanses and Gretchens in the old country. Some other diver would get it if I did n't. It was my first year alone, so I felt more like taking risks than I might now.

"Soon I dropped overboard. It was a dark day, and I had my electric lamp. Down I sank through the dark-green water, my lantern shedding a dim light. Presently I saw the *Bremerhaven* plump under me, resting on her keel and starboard side. Her topmasts and spars were all in a mess, and her iron masts lay across her deck.

"Suddenly out of the blackness where my feet were pointed grew a mass like a big bird's nest. It was the wire rigging, twisted and tangled and wound up in every way you can think of, and in a good many others neither you nor anybody else could imagine, warped by the tumbling of the masts and the pounding of the seas.

"I jerked my line quickly, and stopped. A little

Photograph by Paul Thompson

Preparing for a dive into mysterious depths

more, and I should have gone into the tangle feet first, and perhaps got caught so that I could never have extricated myself. My men hauled me up, and shifted the boat a trifle, and I went down again. This time I alighted on the slanting quarter-deck, just aft of the cabin.

"The end of the bird's nest overhung the open companionway threateningly. It was a fearful snarl of rope and wire and broken wood, festooned with long streamers of kelp, swaying in the undertow. It looked for all the world like the tangled tentacles of a devil fish, only I knew those tentacles were stiff steel, not pliant flesh. As my lantern shone into it, it seemed like a bunch of petrified snakes.

"I did n't half like the idea of going down into that gloomy, uninviting hole, but a diver must take some chances. The forward entrance to the cabin, buried deep under the wire, was simply out of the question. It was the after companionway, or nothing; and I had come too far and at too great expense to give up now.

"Grasping one of the loops with both hands I gave it a shake; but it seemed firm as the deck on which I stood.

"The undertow was increasing slightly as the tide fell, but I felt sure that the mass was too heavy and too firmly caught over the cabin to be disturbed. So I decided to go below. Throwing my lantern ray into the companion, I picked my way cautiously down the slimy steps.

"Nobody had been there since Captain Schermerhorn came up on the run a month before. He had tried to get into his safe, but there had n't been time. It was his life or his money, and he naturally chose his life.

"The door at the bottom stood open. The cabin

was in a sorry mess, everything that would float being, of course, hard up against the ceiling. I crossed the floor, and presently stood in the captain's room.

"How dark and lonesome and creepy it was! Queer little shivers went flushing over me. I had a feeling as if somebody were at my shoulder, or as if something might spring at me out of the gloom. All the tales I had ever heard about cuttlefish and other sea monsters ran through my mind. A premonition of danger came to me, but I shook it off as foolish.

"There was the safe close to the captain's desk. The key was in the lock, but the door, rusted by the water, would not open till I tapped it with my hatchet. Then it turned on its hinges, and I stooped to peer inside.

"Suddenly I became conscious of a grating, a rubbing on the roof of the cabin over my head. An odd, inexplicable dread struck a panic in me. Instinct told me something was wrong. I must get out. No man ever lifted lead shoes faster than I did the next thirty seconds.

"I had just reached the foot of the stairs when athwart the twilight that steamed down the companionway, vying with my lantern, fell a shadow. Then over the opening shot a mass of black bands and arms. The devil fish had come to life!

"Its horrid antennæ were moving; its tentacles, as if endowed with a malignant intelligence, were stretching across my only road to safety.

"At once I realized what had occurred. The undercurrent, increasing with the ebb, had set the mass in motion. Presently it would cover the entire door. If I had only been half a minute sooner!

"Up the stairs I hurried. There was still a little space when I reached the top step, but it was narrowing, narrowing. I plunged forward, almost decided to attempt a leap through, but stopped just in time. The wire weighed tons. If it jammed me against the casing, it would crack me like an eggshell.

"A new horror seized me as I shrank back. My hose, my life line! The two slender bonds that linked me with the upper air, the only things that made it possible for me to be there at all, lay on the deck at the mercy of that moving coil.

"Steadily, irresistibly, it surged back and forth. It caught my lines, it drew them taut, dragging me forward to my knees, almost pulling me head foremost into the tangle outside the doorway; then it relaxed, and I stood up. Again and again the same thing happened. This could not last. It might loosen the couplings of the hose, it might strip the threads, and death would come quickly down there behind that wire wall.

"It was the first time I had ever really felt afraid under water; and I had good reason. But I also had the sense to keep cool. If a diver loses his head, he 's gone. Bowing backward and forward to the pull of the cords, I wondered what I could do.

"I knew that my men in the boat must suspect something was wrong, for they could feel the lines

move. But I could neither send nor receive any signals. Back and forth seesawed the wire, a space on the left of the companionway opening and closing, tempting me to jump through. Had the hole been a foot wider, I would n't have hesitated a second; but it was too frightfully narrow.

"Still, I did try it—just once. The coil leaped back, and pinned me against the casing. One sharp, ugly end punched my side. Another caught my head as in a vise, and squeezed it till my helmet crunched; only a little more, and it would have given way.

"I got back, excited, panting. My effort had tangled my life line still worse. The next pull almost snatched me out into the coil. I could n't stand that. I must cut, or it might finish me. With my hatchet I severed one of the two links that bound me to life, and the hose alone was left.

"The wire was shifting; it was moving farther across the door. Now it did n't get back far enough to leave any opening at all. Suddenly a loop, rubbing along the deck, jammed my hose. Things were getting desperate. The air grew thick. My minutes, my seconds were numbered. I should die miserably unless I gained my freedom at once.

"Then the loop moved, leaving my hose free; and unexpectedly I saw a chance to dodge under the coil. I took that chance. Suffocation was not far away, and I had no time to vacillate.

"Did you ever crawl under a barbed-wire fence?

If so, you'll understand something about how I felt, dreading every minute to have a sharp point catch and stop me. Only my fence was moving, while yours was still; and your life did n't hang on getting through, but mine did.

"A strand brushed my shoulder. I flattened myself, and wriggled on. I never knew before that I could make myself so thin. The air was frightful. I should lose my senses in a minute more. One horrible, merciless point ran into the back of my suit—nailed me there. I writhed and cringed. If it did n't let go quick, all was over.

"Just as I was giving up hope, it let go. I crawled forward. Back it surged and pinched. But I wrenched away just in time, and fell on my lantern on the deck, free at last.

"For a moment I lay there in the dark on that cold, slimy iron, with the wire swaying over me in the strong undertow, and the air getting worse every second. Then I staggered to my feet, and gave the signal on the hose to be pulled up.

"Unconsciousness was at hand, but I had sense enough to realize that my life might depend on my action in the next five seconds; and fortunately I knew just what to do.

"When a diver finds that his air supply is cut off, the best thing for him is to take a full breath, and then, just before he signals to be pulled up, to smash his glass with his hatchet and let the water into his helmet. When he can't hold his breath any longer, he'll have to fill his lungs with water

International News Service

This creature is not a strange marine animal dragged to the light at the end of a rope, but a human being equipped to explore a region as full of dangers and uncertainty as an African jungle

and become insensible But you can roll pure water out of a man, while you can't roll out poison air.

"I shattered my glass, and in rushed the cold brine. Then I seized my hose with both hands, praying that the couplings might n't start off, and held on tight.

"Up, up I went, the water gushing in round my face and body. All depended on the men above, on them and the hose. I had done everything I could. They were pulling me as fast as they dared, but it would be almost two minutes before I could reach the surface.

"Up, up, up! Would the threads hold? My life hung on them. At last I could n't keep my breath in a second longer. I opened my mouth, and in rushed the water. I choked, I strangled, but through it all I remembered that I must hold onto that hose. And I did, to the last second of consciousness. Then everything grew dark and dreamy and quiet, and I went very far away. I did n't know if I should ever come back again; I did n't much care.

"When I recovered my senses I was in the boat, my armor was off, and they were rolling the water out of my lungs. The couplings had held, and my fingers had grasped the hose so tightly that they had been obliged to pry them off. In two or three hours I was myself again.

" 'Not for all the money in my safe shall you again go down,' said Captain Schermerhorn. 'I will

lose my gold. It shall not be bought with your life.'

"I did n't care to make another try that morning. But I had the tug drop a grappling into the wire, and twitch the whole mass a hundred rods away to a place where it could wallow without doing any harm. That afternoon, before the storm broke, I put the contents of the safe in the German's hands."

—From *The Youth's Companion*

BUSINESS

PROMOTION IN BUSINESS

GEORGE H. LORIMER

Some boys are always howling that Bill Smith was promoted because he had a "pull," and that they are being held down because the manager is jealous of them. I've seen a good many pulls in my time, but I never saw one long enough to reach through the cashier's window for more money than its owner earned. And when a fellow whines that he's been held down, the truth is, as a general thing, that other people can't hold him up. He just picks out a nice soft spot, stretches out flat on his back, and yells that some heartless brute has knocked him down and is sitting on his chest.

—From *The Letters of a Self-Made Merchant to His Son*

WHEN A FELLER IS OUT OF A JOB

SAM WALTER FOSS

All nature is sick from her heels to her hair
  When a feller is out of a job,
She is all out of kilter and out of repair
  When a feller is out of a job.
Ain't no juice in the earth and no salt in the sea,
Ain't no ginger in life in this land of the free,
And the universe ain't what it's cracked up to be
  When a feller is out of a job.

What's the good of blue skies and of blossoming trees
  When a feller is out of a job;
When your boy has large patches on both of his knees,
  And a feller is out of a job?
These patches, I say, look so big to your eye
That they shut out the landscape and cover the sky,
And the sun can't shine through 'em the best it can try
  When a feller is out of a job.

When a man has no part in the work of the earth,
  When a feller is out of a job,
He feels the whole blundering mistake of his birth
  When a feller is out of a job.
He feels he's no share in the whole of the plan,
That he's got the mitten from Nature's own hand,
That he's a rejected and left-over man,
  When a feller is out of a job.

For you've jest lost your hold with the rest of the crowd
  When a feller is out of a job;
And you feel like a dead man with never a shroud,
  When a feller is out of a job.
You are crawling around but you're out of the game,
You may bustle about—but you're dead jest the same—
You're dead with no tombstone to puff up your name,
  When a feller is out of a job.

Every man that's a man wants to help push the world,
But he can't if he's out of a job.
He is left out behind, on the shelf he is curled,
When a feller is out of a job.
Ain't no juice in the earth and no salt in the sea,
Ain't no ginger in life in this land of the free,
And the universe ain't what it's cracked up to be
When a feller is out of a job.

THE MAKING OF A MERCHANT

HARLOW N. HIGINBOTHAM

He started in by tending the telephone at a grain elevator, and "keeping the weights"—that is, copying the scale tickets into a book—when not busy at the 'phone. He made it a business always to be caught up with his work, so it often happened that when he went to the scale floor for the tickets they were not ready for him. This gave the young man leisure to become familiar with the weighman's work, and with the scales and machinery of the elevator. Occasionally he induced the weighman to let him tend one scale, and later two scales, until he became thoroughly familiar with the work.

About this time the employer built a new elevator, and the young man secured the position of timekeeper, undismayed by the fact that the timekeeper was expected, in addition to his regular work, to tally and record every load of lumber, stone, brick, sand, iron, and other material going into the construction of the elevator.

The elevator was built by day labor instead of by contract. The first day twenty men started work, the second day there were forty, the third day sixty, until nearly two hundred men were engaged. Despite the fact that these laborers were of almost a dozen different nationalities, the young timekeeper so familiarized himself with their names and faces that he was able to call by name each man who had worked for even a single day. He could also tell, quite as readily, in what part of the building each man worked; and he missed at once any laborer who stole away, for an hour or two, to a neighboring saloon.

When the elevator was completed, a weighman was needed and the young man applied for the position. After convincing the employer that he understood the work and that he had watched the construction of every grain spout, and therefore knew into what bin each one led, he was given the position.

He soon became so expert that the weighing did not require his entire time, and during moments otherwise unoccupied he turned his attention to the cleaning machines on the same floor, and was finally allowed to tend these machines in addition to the work of weighing. He became an expert in the art of telling at a glance the exact grade of a given sample of wheat, and during this schooling he managed to learn from the foreman just how grain is mixed to produce a given grade. He soon gained the name of being the best grain expert in the

Janet M. Cummings

The grain expert who spends his days in a great elevator where wheat is stored can tell at a glance the exact grade of a given sample of wheat

elevator, and held this enviable position, in the eyes of his fellow workers, for a number of years.

One day one of the young man's employers came

to him and said, "I am going to buy you a membership in the Board of Trade. You can buy car lots down there. I have been watching you, and I hear from people around that you are as good a judge of grain as there is. You are just the fellow we want."

Thus began his career as a commission merchant. But the keynote of his advancement from one position to another was that he learned to do the work of the position next in line of promotion.

THE BATTLE OF THE RUBBER BANDS

ADAPTED

A good retail merchant is his customer's ally. He knows vastly more about his goods than the buyer can know; and if he is a good salesman, he puts his knowledge at his customer's service, advises him how to lay out his money to the best advantage, and even on occasion helps him to make up his mind.

But when the retail dealer, turning for his goods to the wholesaler, himself becomes a buyer, the case is different. Now both parties know the market, both are experts. Neither has any advantage, so it is often a battle royal of wits to see which of two well-matched antagonists will outguess the other.

The owner of a large stationery store had long been accustomed to buy his supplies from a particular manufacturer. Every few months the traveling salesman of the wholesale house would appear at the store, confer with the owner, and take orders for several thousand dollars' worth of goods, enough

to supply the shop till the next visit. A hundred dozen boxes was the usual order of rubber bands.

"Well," said the salesman on one of his visits, "I suppose it's the regular thing in rubber?"

"Yes," said the dealer, "make it a hundred." Then he went on to ask about paper and pens and ink and picture postcards and all the thousand and one articles that a stationer carries in stock.

Meantime, in the back of his mind, he was thinking in this wise:

"I know there is some trouble with the supply of crude rubber, for the price has been jumping back and forth. If in the next few months the price of rubber is going to rise, I want to buy a big supply of bands now before it jumps. But if the price is going to drop later, I want to buy from hand to mouth, just enough to carry me along till I can get them cheaper. Now I don't know what is going to happen, but I'll bet that salesman does, and I am going to make him tell me."

So, having talked about other matters for a while and put in some large orders, he said, quite casually, "Oh, on the whole, I guess I'll take only fifty dozen of those rubber bands."

Without a word, the salesman changed the order.

"Did I say fifty?" said the merchant. "Make it five hundred!"

For he reasoned thus: "That man said nothing when I cut my order in half—he had rather sell me a half order than a whole one. That means he knows that the price is going to rise and he can

sell me the other fifty dozen later and make me pay more. My game, then, is to stock up now."

The buyer had outguessed his opponent.

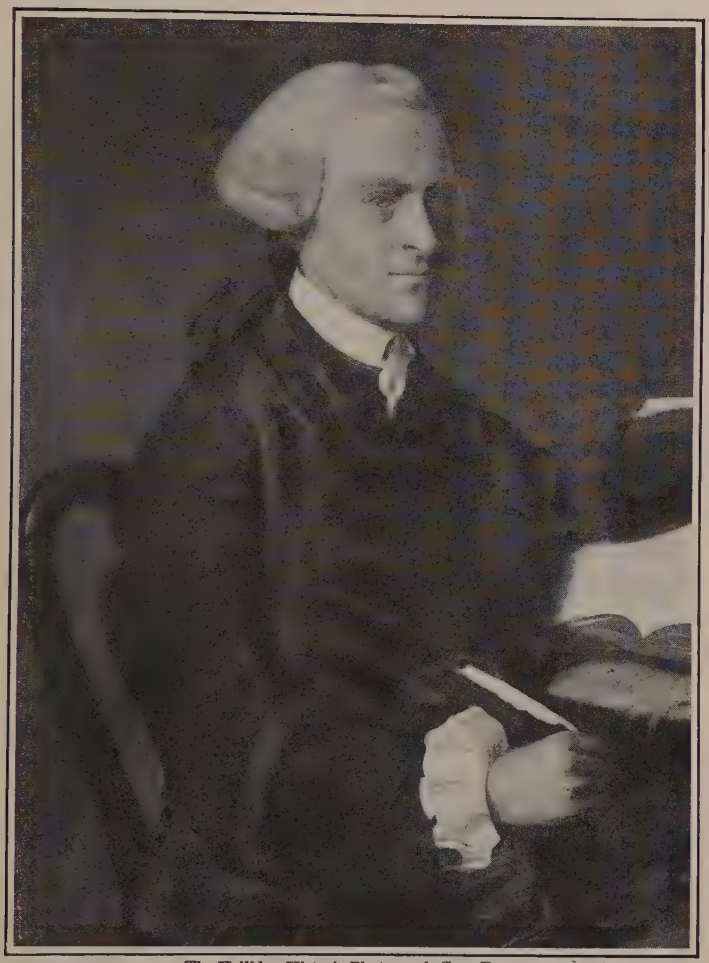
JOHN HANCOCK: MERCHANT

PARK PRESSEY

By all rules of the game, as played around 1776, John Hancock should have been a Tory. Unlike many of his associates he had everything to lose and little to gain through joining the patriot cause. He was not only one of the richest men in New England, but his property was so exposed that he ran the risk of losing it all by opposing the King's party. He would have had much good company had he clung to the Loyalists, but in that case his famous signature would have been attached to nothing more remarkable than bills of lading, and United States history would be much less interesting.

And yet John Hancock was born to neither riches nor a business life, for he was descended from a line of New England ministers and would naturally have followed in the profession of his ancestors. But his father died when John was only seven years old and the boy was then taken into the home of his rich Uncle Thomas of Boston. From that time he was destined to become a merchant.

To the country boy, accustomed to a quaint little parsonage in Braintree, the new home must have seemed a palace. The house stood on Beacon Hill,



The Halliday Historic Photograph Co. From a portrait by Copley

JOHN HANCOCK

A business man who so directed his business affairs as to be of the highest service to his country, and who did not hesitate to sacrifice his private interests for his country's good

overlooking the Common, was built of brownstone and granite, and beautifully furnished. When ordering from England materials for equipping his residence, Thomas Hancock always added, "Pray let it be of the best." Behind the house, where the State House now stands, were beautiful gardens filled with rare fruits and flowers.

In these surroundings John Hancock grew up. He fitted for Harvard at the Public Latin School, and graduated from college at the age of seventeen. As the adopted son of Boston's most prosperous merchant he might easily have become a snob. That he did not was undoubtedly due to the good sense of Uncle Thomas and his strong-minded but lovable wife, Aunt Lydia.

After receiving his degree at Harvard, John Hancock entered his uncle's office, and for the next six years occupied his time in making out invoices and learning the routine of an importing and exporting house which had several ships plying between Boston and London. This was splendid training, for while he dug away at the fundamentals of a business life, he was in close touch with a man of wide acquaintance and excellent ability.

Thomas Hancock showed his broad outlook when, at the end of the six years, he sent John to London to get acquainted with the English agents of the firm, and see something of the world. The year which the young man spent abroad was an eventful one, for during that time came the death of George II and the coronation of his successor. The Boston

clerk is said to have been presented at court and to have received a fine snuff box at the hands of His Majesty George III. He mingled with the best society and made lifelong acquaintances. It might easily happen that "a most presentable young man," fond of good clothes and the admiration of his fellows, furnished with unlimited letters of credit, and only the mild injunction from his uncle: "Be frugal of expense, do honor to your country, furnish your mind with all wise improvements, and keep the pickpockets from my watch," would become enamored of the gaieties of London and wish to continue in them. But as the time came for returning home we find him writing to his family, "I shall with satisfaction bid adieu to this grand place with all its pleasurable enjoyments and tempting scenes, for more substantial pleasure which I promise myself in the enjoyment of my friends in America."

Back in Boston, Hancock again took up his work in the store and office; but only a little more than two years passed before his uncle, "having had long experience of his uprightness and great abilities for business," took the young man into partnership. The very next year after the new firm of Thomas Hancock & Company came into being, the senior partner died suddenly, and at the age of twenty-seven John Hancock came into possession of a fortune and the largest business in Boston. But the years of training spent at counter and desk and wharf enabled him to meet the responsibility with little disturbance to the business.

The Halliday Historic Photograph Co.

Hancock House, Boston

The next few months were a period of prosperity for the young merchant. His vessels carried "whale oyl," whale bone, and "Pott ashes" to London, and brought back coal, hemp, and all sorts of manufactured articles for his wholesale and retail stores. It was at this time that he advertised: "Store No. 4, at the east end of Faneuil Hall Market, a general assortment of English and West India goods, also choice Newcastle coals, and Irish butter, cheap for cash." He gained advantage over his competitors through paying cash for his purchases. He wrote his London agents, "I will venture to say that no one person makes larger or more timely remittances than I do." He secured interests in whaling vessels and in the supply of "oyl" from Nantucket and Martha's Vineyard to such an extent that he barely missed becoming the first oil trust.

As Paul Revere came into prominence in the Sons

of Liberty through his skill as a mechanic, so John Hancock's business standing gave him entrance to political councils. His public career began in a modest way when, at the age of twenty-eight, he was elected a selectman in the town of Boston. From that time until the end of his days he was almost continuously in some public position—at the expense of his health, his business, and a large part of his fortune, to say nothing of the narrow margin by which he escaped being hanged.

When England began her campaign of taxation against the colonies, Hancock, as an exporter and importer, was quick to see the burden such a course would put upon the new country. At that time he took his stand with those who opposed taxation without representation and he never wavered in his attitude. He repeatedly wrote his London agents that England's policy meant ruin for American trade, and urged all possible help from them. At the end of one particularly forceful letter he added this postscript: "This letter I propose to remain in my letter book as a standing monument to posterity, and to my children in particular, that I by no means consented to a submission to this cruel Act [Stamp Act] and that my best representations were not wanting in the matter."

The first clash between Boston citizens and the "home" government came on account of the seizure of Hancock's ship *Liberty* for smuggling. This seizure aroused a mob which did considerable damage

and caused the hasty retirement of the revenue officers to the protection of Castle William in the harbor. The affair stamped Hancock as on the side of "the people," and he was re-elected selectman and representative to the General Assembly by the biggest vote given to any candidate.

Stormy times were fast approaching, however. Feeling became so strong against England's efforts to tax the colonies that many advocated doing away with all importation, and John Hancock approved this course although it meant great loss to himself. The famous "Tea Party" emphasized this feeling to such a degree that the Royal Governor, General Gage, forbade the holding of town meetings, except at his call, and abolished the General Assembly. He revoked Hancock's commission as Colonel of Cadets, commonly called the Governor's Guards; but this only caused the corps to disband and offer their services to their deposed colonel. Hancock still further enraged General Gage by the address he delivered in the Old South Meeting House on the third anniversary of the Boston Massacre.

John Hancock was president of the Provincial Congress, which took the place of the General Assembly and held its sessions in Concord. After the adjournment of this body in April of 1775, he, with Samuel Adams, went to the home of the Reverend Jonas Clark in Lexington. The Clarks and Hancocks were relatives, and the house was built by John's grandfather, "Bishop" Hancock, who used it as a parsonage for over fifty years.

Here, too, came Aunt Lydia and Hancock's fiancée, Dorothy Quincy, for it was no longer safe for them in Boston. Only a short time before this, "Col. Hancock's elegant seat, situated near the Common, was attacked by a number of officers, who with their swords, cut and hacked the fence before his house in a most scandalous manner and behaved very abusively." Thus it came about that "on the eighteenth of April in seventy-five," Hancock and his friends were peacefully sleeping in the old parsonage, when there came

A voice in the darkness, a knock on the door.

The story of the midnight warning by Paul Revere is familiar to all; but it is not so well known that only by the greatest effort was Hancock dissuaded from remaining at the house and personally opposing the British regulars with flintlock and sword. It was Adams who finally convinced the thoroughly aroused young man that it would be rash folly to run such a risk; for it was recognized among the leaders of the patriot cause that this expedition by the British was aimed as much at the capture of Hancock and Adams as at getting possession of the ammunition stored at Concord. To these two alone had pardon been refused, should the "rebels" decide to submit to royal authority. Therefore, in the early morning hours, they made their escape to the neighboring town of Woburn, ere the firing of "the shot heard round the world."

Previous to this, Hancock and Adams had been chosen delegates to the Second Continental Congress,

and directly after the Battle of Lexington they set off in Hancock's coach for Philadelphia. The journey was long and hard, but the strain was somewhat relieved by the enthusiasm met along the way, especially at New York, where a crowd of young men wanted to take off the horses and themselves draw the coach.

Hardly had Hancock taken his seat as a delegate, when he was surprised by unanimous election as President of the Continental Congress—at that time the highest honor in the power of the colonies to bestow. Benjamin Harrison said, as he placed Hancock in the chair, "We will show Mother Britain how little we care for her by making a Massachusetts man our President, whom she has excluded from pardon and offered a reward for his head."

His tall and scrupulously well-dressed person, his calm, unruffled demeanor, and especially his absolute fairness in his treatment of all, had made Hancock an ideal presiding officer from the days when he first became moderator of Boston town meetings; and his careful business training, the experience of meeting all classes of men at home and abroad, now enabled him to preside acceptably over an assembly which was truly remarkable, for George Washington, John Adams, Thomas Jefferson, and Benjamin Franklin were only a few of the men of rare ability among its members.

Meanwhile, Aunt Lydia and Dorothy had found refuge during the siege of Boston at the home of Thaddeus Burr in Fairfield, Connecticut. It has

been said that a visit to his uncle by the fascinating young Aaron Burr caused the ever-alert Aunt Lydia to urge her nephew to hurry to Fairfield. Anyway, during sultry August, Hancock made the journey from Philadelphia, and, in a style befitting the President of Congress, was married to his "Dear Dolly."

In Philadelphia the feeling that the colonies must separate from England was now growing very rapidly. Previously there had been only the intention of securing from the mother country equal rights with those "at home"; and when it became evident to Congress that separation alone would relieve the burden, it was a matter of serious concern whether the colonies would back their representatives in advocating such a course. It was then that some one said, "We must hang together," and the ever-ready Franklin added, "or we shall all hang separately." But in the face of dire possibilities the Declaration of Independence was drafted. When the document was put before him, the President placed his well-known "John Hancock" to it in letters bolder than usual, "so that George the Third may read it without his spectacles," as he cheerfully remarked, although he had signed his death warrant in the event of any failure on the part of the colonies to carry their rash undertaking to complete victory.

John Hancock's detractors have said he was a vain man, flattered by the praises of those who put him into office only that they might have the benefit of his social position and great wealth; but it is hardly

conceivable that a man not sincerely devoted to the cause he represented could so easily assume personal risk. Furthermore, he was ever ready to sacrifice his own interests. When the matter of authorizing Washington to bombard Boston was considered in Congress, and it was intimated that Hancock had much to lose, he calmly replied, "It is true, sir, nearly all of the property I have in the world is in houses and other real estate in the town of Boston; but if the expulsion of the British from it, and the liberties of our country require their being burnt to ashes—issue the order for that purpose immediately." And to Washington he wrote, "May God crown your attempt with success. I most heartily wish it, although individually I may be the greatest sufferer." No sound of the demagogue there!

Ill health caused Hancock to resign the presidency after two and one half years of service. He then brought his wife to the home on Beacon Hill. It is interesting to note that the Hancock mansion really suffered little damage during the siege. It became headquarters for General Clinton and for Lord Percy, and the stables were used as a hospital for the wounded from Bunker Hill; but aside from ruined carpets and some broken glass it was not much harmed. It afterwards entertained the man who drove the British from the town.

In this home the Hancocks kept open house—and friends, few or many, were always welcomed. John Hancock's lavish hospitality and his ready ability to smooth out strained relations were responsible for

retaining the good will and coöperation of the French officers after a misunderstanding had nearly caused a rupture between the two nations. At these feasts at the Mansion, Dorothy Hancock also played an important part, for she was the capable, brilliant, and graceful presiding genius of the household, always able to meet emergencies. At one time when thirty officers from the French fleet were invited to dinner and one hundred and fifty came, including scores of hungry midshipmen, Mistress Hancock sent out her servants to milk all the cows on the Common, regardless of ownership, and by quick action in other ways provided sufficient food for all,— much to the delight of her admiring husband.

A few days after the dinner at the Mansion, Count d'Estaing returned the compliment by inviting Mr. and Mrs. Hancock to a banquet on board the flagship *Languedoc*. During the dinner one of the officers suggested to Dorothy Hancock that she pull a cord hanging near her chair. She did so, and immediately there was a tremendous booming of cannon, for she had given the signal arranged for firing a salute from every gun of the fleet.

Not alone to those who had something to offer in return did Hancock grant his favors. He was always ready to help any in need,— from giving pulpit furniture and a large cash donation to Brattle Street Church, to the distribution of one hundred and fifty cords of wood among poor families. He once gave a banquet at the Green Dragon Tavern, at a cost of $1,000, to the leaders of the "North

Enders" and the "South Enders," between whom there was a traditional feud which broke into fighting on each "Pope's Day." At the end of the dinner, the leaders shook hands and agreed to "call it off" for the future. It is estimated that Hancock's devotion to the cause of Liberty cost him $100,000. As John Adams said, "If Hancock's fortune had not been very large he would have died a poor man."

Naturally, John Hancock became the most popular man of his day in New England. Massachusetts, Maine, New Hampshire, and Vermont named towns for him, and Maine has a Hancock County as well. When the time came to elect the first Governor of the Commonwealth of Massachusetts, John Hancock received 11,000 out of 12,200 votes. He was ten times re-elected.

During the struggle of the colonies, Hancock's business was practically abandoned, but at the close of the war we find that he intends to again "pursue business." He wrote a former sailing master, "I am rebuilding my store upon the Dock which the Brittons burned to ashes when they were in possession of Boston," and he commissioned the captain to buy a vessel for the London trade. But continued ill health prevented him from taking up his work with the old vigor, and at the age of fifty-six he died at his home on the hill.

John Hancock left no descendants. A little Lydia remained on earth but a few months, and a promising son, John George Washington, died from a fall while skating, when only nine years old.

In his scarlet velvet coat, white embroidered waistcoat, black "small clothes," white silk stockings, and black shoes with silver buckles, John Hancock was a picturesque figure during the days of dawning liberty. If somewhat pompous and over fond of praise and flattery, he was generous to a fault, saw his duty to his country, and followed it consistently to the end.

HOW CYRUS LAID THE CABLE

JOHN G. SAXE

Come, listen all unto my song;
  It is no silly fable;
'T is all about the mighty cord
  They call the Atlantic Cable.

Bold Cyrus Field he said, says he,
  "I have a pretty notion
That I can run a telegram
  Across the Atlantic Ocean."

Then all the people laughed, and said
  They'd like to see him do it;
He might get half-seas-over, but
  He never could go through it;

To carry out his foolish plan
  He never would be able;
He might as well go hang himself
  With his Atlantic Cable!

Janet M. Cummings

The "Great Eastern" off Sheerness, England, receiving the Atlantic Cable on board

But Cyrus was a valiant man,
  A fellow of decision;
And heeded not their mocking words,
  Their laughter and derision.

Twice did his bravest efforts fail,
  And yet his mind was stable;
He wa'n't the man to break his heart
  Because he broke his cable.

"Once more, my gallant boys!" he cried;
  "Three times!—you know the fable!
(I'll make it thirty," muttered he,
  "But I will lay the cable!")

Janet M. Cummings

Coiling the Atlantic Telegraph Cable in one of the holds of the "Great Eastern"

Once more they tried,—hurrah! hurrah!
  What means this great commotion?
The Lord be praised! the cable's laid
  Across the Atlantic Ocean!

Loud ring the bells—for, flashing through
  Six hundred leagues of water,
Old Mother England's benison
  Salutes her eldest daughter!

O'er all the land the tidings speed,
  And soon, in every nation,
They'll hear about the cable with
  Profoundest admiration!

Now long live James, and long live Vic,
  And long live gallant Cyrus;
And may his courage, faith, and zeal
  With emulation fire us;

And may we honor evermore
  The manly, bold, and stable;
And tell our sons, to make them brave,
  How Cyrus laid the cable!

THE CARPENTER WHO FOUNDED A UNIVERSITY

ADAPTED

Ezra Cornell had no special talent for any particular sort of work. He simply took up whatever came to hand—and did it better than anybody else.

He was brought up in what, at the beginning of the nineteenth century, was called the Great West; that is to say, central New York State, a hundred and fifty miles west of Albany. It was a wild country where travelers journeyed with their own horses and camped out at night for lack of inns, and the farmers had to cut off the heavy "first-growth" wood to get land for planting.

Young Cornell began by mastering two vocations—pottery making, which was his father's trade, and farming, which was the industry of the neighborhood. When he was sixteen his father, needing a larger pottery, set him to helping the carpenters. Ezra, thereupon, picked up carpentering; and the next

EZRA CORNELL

The carpenter who founded a university

year, he and a younger brother, between them, built an entire new two-story dwelling for the family, that was much the best house in their village. This made three different trades at which Cornell could earn a good living.

Of the three, he liked carpentering best; and so, when he was eighteen, he left home and set up as a carpenter. Two years later, he entered a machine shop and added still another vocation to his outfit. His shop being a mere twenty miles from his father's house, he used to walk over to see his parents every Saturday night after his week's work was done, and walk back again Monday morning in time for his regular duties. Cornell, be it noted, was not exactly a namby-pamby person.

At length he found work as a carpenter in Ithaca, New York, where he undertook to keep a cotton mill in order, and later a plaster mill. Here, from odd jobs at repairing, Cornell rose to be general manager and construction engineer, besides inventing some valuable new machinery. Incidentally, just to put in his spare time, he built himself a dwelling house for his growing family.

Then suddenly, when Cornell was thirty-six, came the great panic of 1837 which wrecked the business of the country and threw thousands out of work. Cornell, after months of idleness, tried selling a patent plow. Forty miles of walking a day it cost him, and even then he could hardly make a living.

Nevertheless, this apparent misfortune proved the turning-point of his career. Samuel F. B. Morse

had just invented the telegraph—which almost nobody thought would work—and had persuaded Congress to vote thirty thousand dollars for a trial line between Washington and Baltimore.

Cornell, traveling through Maine with his patent plow, ran across an acquaintance named Smith.

"Cornell," said Smith, "I have taken a contract from Professor Morse to lay lead pipe with telegraph wires inside, for one hundred dollars a mile; and it can't be done by hand at that price. Unless I can invent a machine for the work, the whole scheme will fall through."

Cornell asked the details, sat down on the floor with a bit of chalk, and in a short while had drawn out on the boards an invention for digging a ditch an inch and a quarter wide and two feet and a half deep, laying a pipe in the bottom, and filling the trench again as before.

Smith did not believe that this offhand invention would work. But Cornell with his own hands built the frame and made the patterns for the castings. When the machine was done he invited Smith and Morse to see it tried. They wound a length of pipe on the drum, yoked on eight oxen, and started with a rush. The pipe disappeared. Morse would not believe that there had been any pipe in the machine until he had seen the entire length dug out with a shovel.

Cornell then went to Baltimore to superintend his machine. The pipe was nearly laid, and the appropriation nearly used up, when it was found

A view of Cornell University

that the wires inside the pipe were leaking electricity and the line would not work. Cornell advised stringing the wires on poles. The plan worked, the line was completed, and, as everybody knows, the first important message sent over it was the news of the nomination of Polk for President.

And yet this first successful electric telegraph was a complete business failure. The government would not buy it; no private capitalist had any faith in the invention, or was willing to put any money into developing the enterprise. The single line already built began by earning fifty cents and a dollar a day, and after two years had not reached an income that would pay the wages of a single operator. The public simply would not telegraph.

Cornell, almost alone, had faith in the future. He built a short line in Boston—and the Bostonians would not even look at it. He tried a line in New York—and the New Yorkers were even more indifferent. The business men of Chicago refused to invest a single dollar in a line to connect their city with New York. But Cornell put into the project every cent of money he could raise.

Gradually, he educated the public until it began to send telegrams. Success, once started, came with a rush. Cornell himself built most of the early lines; and as these increased in number, he united them into the Western Union Telegraph Company, of which he was for many years the largest owner. He had tried in turn farming, pottery, carpentry, mechanics, mill management,

engineering, invention, and salesmanship, and succeeded in them all. Finally he made a fortune in a business enterprise. Then he went back to farming for amusement.

Ezra Cornell never forgot how, when he was a boy, he and his brother had cleared away four acres of heavy timber and planted the land to corn, in order that they might have money for one more winter's schooling. And now that he had become a millionaire his great desire was to found an institution where, as he said, "anybody can find instruction in any study," but especially in the practical and useful subjects of which he himself was master. The result was Cornell University.

MECHANICS

COWBOYS OF THE SKIES

ERNEST POOLE

He was standing out on a steel girder, with a blueprint map in his hands. He wore brown canvas trousers tucked into his boots, a grimy jumper, a shirt wide open at the throat, buckskin gloves frayed by hard use, and an old slouch hat on the back of his head. His lean, tanned face was set in a puzzled scowl as he glanced now at the map and now downward at the steel frame of the building. I came cautiously nearer, looked over, and drew quickly back, for there was a sheer drop of five hundred feet between him and the pavement.

This was on the thirty-fifth floor. The building, the "Metropolitan Life," was to rise fifty "tiers" in all, seven hundred feet, the highest of all the skyscraper cluster. From our perch the eye swept a circle some sixty miles across, with Greater New York sprawled in the center. Even through the noise of the wind and steel you could hear the hum of the city below, and looking straight down through the brisk little puffs of smoke and steam, the whole mighty tangle of Manhattan Island drew close into one vivid picture.

Down there humanity hurried and hummed. Up here the wind blew fresh and clean. Above me, on the open steel beams that bristled up into the heavens, some two hundred grimy men clambered

International News Service

Pushing the frontier line of civilization toward the clouds

about. Between their work and the world below were two connecting links, the blueprint map and the beam of steel.

"Look here," said the man with the blueprint, "here's one of the girders coming up."

There was a creaking and straining over our heads as the ponderous derrick swung round. Its "mast" of steel was lashed by cable guys to the center of the building's frame. From the base of the mast the steel "boom" reached upward and outward, extending some twenty feet over the cañon below; and from its upper end two cables, looking like mere silken threads but in reality one-inch ropes of woven steel, dropped five hundred feet to the pavement. Slowly the boom swung out to position; the cables grew taut, and began to move.

Looking over the edge I could see the girder leave the street, a twenty-ton beam that looked like a straw. Slowly, moment by moment, its size increased. Now I could see it swing slightly, and tilt, steadied by a guy rope that curved in the wind like a colossal kite-string. The journey took five minutes in all. At last the beam rose to the rough concrete floor on which we stood.

A man beside me gave a sharp jerk to the bell rope. This rope ran thirty-five stories deep into the heart of the building. In his closet down there the engineer jerked a lever; the engine stopped. Up here the great girder stopped, and hung motionless before us.

Another jerk on the bell rope, an instant's pause, then the boom swung in and the girder came toward us. Another sharp jerk, and it stopped in midair. A man leaned forward, took a tight grip on the cable,

and stepped out onto the tilting mass. It swung out over the street. Still another jerk on the rope, and it started on up with its puny rider. He stood with feet planted firmly in the chains that wound it round, his hands on the cable, his body swaying in easy poise. Once he glanced at his feet and the void below, then gave me a humorous wink and spat off into the universe.

For the floor two tiers above us the upright columns had already been placed, pointing straight up, silhouetted against the blue vault above. Near their tops were the "beam seats," supports into which the girder was to be fitted. More and more slowly it rose and moved into position. The signals came now in rapid succession, till at last it hung between the two columns.

The rider crept out to one end. He might have been a fly, for all the effect his weight had on the balance. With his left hand clinging tightly to the steel, his eyes fixed steadily straight ahead, suddenly he reached out with his right hand, seized the column, and, as the girder slipped into its seat, snatched the long, tapered "spud wrench" from his belt and jammed it through two rivet holes. The mass was safely anchored. Back he crept to the other end, and there the job was repeated.

The new floor, or "tier," was now started. Later, when the columns and girders were fitted together on all four sides of the building, the flimsy wooden scaffolds would go up and the riveters would begin.

International News Service

The cowboys of the air see no reason for fear in such a situation but go about their duties in an easy, matter-of-fact way as if walking on solid ground

These riveters were already at work on the floor just above us. Up there on a platform three feet wide was a stout, fiery little forge where the rivets were being heated white-hot. The forge tender

plunged in his long, slender tongs, pulled them out with a flaming rivet clinched in their jaws, whirled them round in two sweeping circles, let go—and the rivet went sailing a hundred feet, to be caught in a keg by a man who stood poised on a beam to receive it.

It looked easy enough. But had the catcher dodged back from the flaming thing flying into his hands, he would have dodged all the way to the curb below. Nobody misses up there, though—at least, only once in a very long time—and between misses nobody thinks. If men stopped to think, the accident rate would be doubled. So all is done in an easy, matter-of-fact sort of way.

Once, just as the man with the tongs had started to whirl them to toss off his missile, the man with the keg threw up his hand as a signal that he was not ready. And then, as if doing just what he had intended, the man with the tongs let the rivet fly straight up into the air with a throw so precise that a moment later it dropped toward his upturned face. Like a ball player catching a "fly," he watched it come, made a quick step aside, caught it adroitly in the jaws of his tongs, and plunged it back into the forge.

On the outer side of the girder to be riveted, a narrow scaffold was hung by ropes from above. On this scaffold stood a man who received with his tongs the rivet, still flaming, from the man who had caught it in the keg. A moment later he jammed it into its hole, connecting the girder with

International News Service

Standing on a platform a few feet wide, five hundred feet up in the air, the foreman calmly explained the use of the pneumatic riveter

a huge column. On the inside a third man lifted a tool called a "gun," a ponderous pneumatic hammer driven by compressed air that comes through a five-hundred-foot hose from the world below. He held the tube firmly against his stomach, while with a deafening rat-a-tat-tat the hammer began its fierce pounding, welding the red-hot end of the rivet flat against the steel.

Meanwhile, looking over the beam, I could see the man on the scaffold outside with a "Dolly bar," one end pressed on the rivet head, the other end tight against his waist. So he held the rivet in place, taking the rapid succession

of shocks from the stroke of the "gun" inside, his feet braced firmly on the planks, his body bent forward to meet the blows that were bucking him off into space. This is called "bucking the Dolly bar"—on a three-foot scaffold out in the air.

Cowboys they are in job and in soul, these men who work on the pinnacles. Like the men on the plains, they come from all over the world: Americans, English, Irish, French-Canadians, Swedes, now and then an Italian. In the New York gangs this year two full-blooded Indians are at work, cool-headed and sure, climbing about on the dizzy heights, with only a glance now and then down into the tangle of civilization, into the land that was once theirs.

While I was up on the "Metropolitan Life," twenty-five stories below us the offices were already completed, the business firms were moving in. On the floors between worked over a thousand men at a score of trades. But the men on the top looked down on these others as cattlemen out on the plains might look upon butchers and tanners. For only on top were the "real jobs," the jobs in the world's open places.

Rough pioneers are these men of steel, pushing each year their frontier line up toward the clouds. Wanderers, living for their jobs alone. Reckless, generous, cool-headed, brave, shaken only by the grim power of fate, living their lives out fast and free—the cowboys of the skies.

—From *Everybody's Magazine*

BENJAMIN FRANKLIN: PRINTER

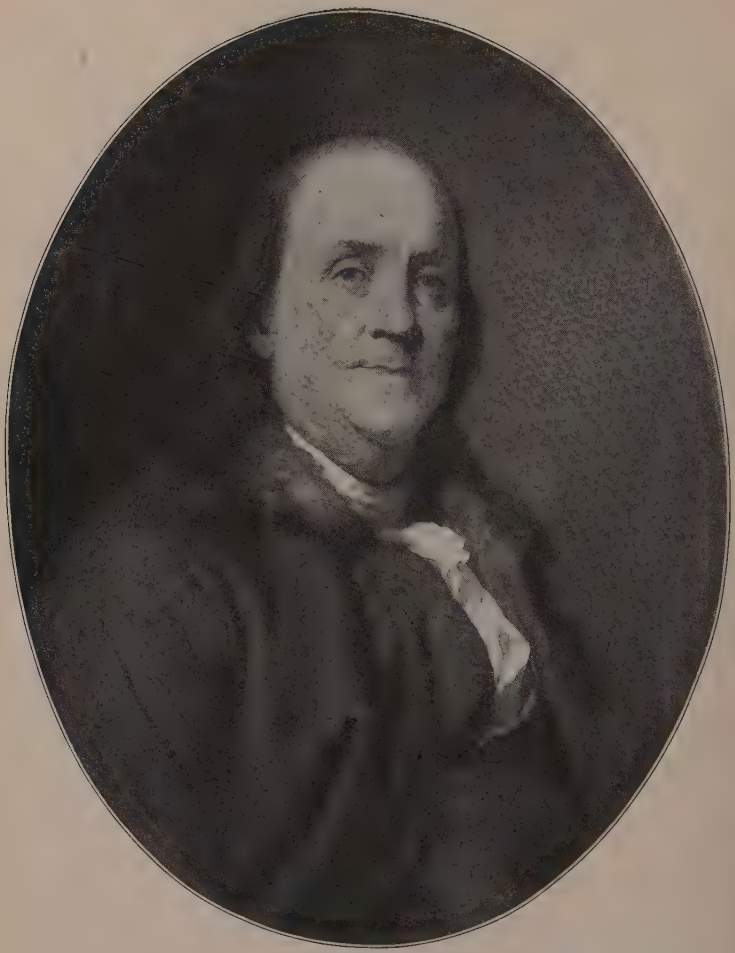
PARK PRESSEY

For three hundred years, and nobody knows how much longer, the Franklins had been farmers and mechanics, with the eldest son in each generation a blacksmith. Therefore it was by happening to be the youngest son instead of the firstborn that Benjamin Franklin escaped a life at the forge. Undoubtedly he would have won fame for himself had he chosen to be a follower of Vulcan, but his peculiar genius had a much better opportunity at the printing press than it could have found at the anvil.

Benjamin Franklin was born in a modest house on Milk Street in Boston, and on the day of his birth was baptized in the Old South Meeting House, just across the street from his father's home.

The father, Josiah Franklin, intended that Ben, "as a tithe of his sons," should become a minister, but the expense of sending a boy through college loomed large to the father of seventeen children, and he soon took Ben out of school. In fact, not quite two years of "schooling" were allowed the boy who was, nevertheless, destined to receive degrees from Harvard, Yale, Oxford, Edinburgh, and St. Andrew's universities.

At ten years of age Ben was put to work in his father's "tallow chandlery." But cutting wicks, running candles, and boiling soap had very little



From the portrait by Joseph Siffrein Duplessis

BENJAMIN FRANKLIN

In the midst of the fame and high honor that came to him, Franklin was most proud of his success and skill as a printer

attraction for a youngster who gazed longingly at every sloop and brigantine that tacked into the harbor, and who found keen delight in lying on his back and being towed across the millpond by the string of a kite.

Like a wise father, Josiah Franklin tried to find out just what the lad did want to do for a living, and for what he was fitted. He took Ben to see men of many trades at their work, and watched for signs of interest on the boy's part that would help in fixing upon some line of work. In fact, the elder Franklin seems to have been the first man to attempt well-grounded vocational guidance of his son.

But Ben's chief interest was in books. He has said he could not remember when he learned to read. Long before he entered school he could get enjoyment out of such works as were found in the New England homes of that time, and all his little earnings went for books. It was this "bookish" tendency that finally led to his becoming an apprentice to his brother James, who had thoroughly mastered the trade of printer and opened a shop of his own. The fact that it would give him opportunity to read more and better books made the printing trade the more attractive to Ben, and he did not hold out long against being bound to his brother. And so, when he was twelve years old, Franklin's vocation in life was determined, although he later developed a wide variety of avocations.

A boy of Ben's versatility could not long be

confined to setting type and operating a press. He scribbled some verses, and his brother sent him out on the street to sell them. He then tried writing prose, but found he "wanted a stock of words, or readiness in recollecting and using them." So he spent most of his spare time in reading, writing from memory what he had read, and then comparing his work with the original. In this way he gained proficiency.

James Franklin published a newspaper, the *New England Courant*, to which several of his friends contributed lively articles. One night Ben slipped an unsigned piece of his own writing under the office door, and waited anxiously for the comment of his brother's friends. "It was found in the morning," Franklin says. "They read it, commented on it in my hearing, and I had the exquisite pleasure of finding it met with their approbation, and that, in their different guesses at the author, none were named but men of some character among us for learning and ingenuity." This encouraged him to write more, and before he was discovered he had contributed many articles that showed a vein of humor entirely new in newspaper work.

The paper soon got James into trouble, however, for the Assembly took offense at some of his political writings, imprisoned him for a month, and forbade him to publish the *Courant*. As a subterfuge, the paper was brought out under the name of Benjamin Franklin, and the boy of seventeen became, in name at least, publisher of one of the few successful

newspapers in America. Until his brother's release he was the real publisher.

This sudden promotion may have caused the boy to assume undue importance, or his brother may have been jealous of the lad's success. Anyway, a long-standing quarrel between the brothers was now intensified, and Ben determined to take advantage of a nominal release from his apprenticeship. As James prevented his getting work with any other Boston printer, he sold some of his precious books to raise money, stole away, and took passage on a boat to New York.

Franklin found no opening in New York, but was advised to seek a position in Philadelphia. Again he set out on a long journey. He took a small boat across to Perth Amboy, walked the fifty miles to Burlington, part of the way through a hard October rain, and went down the river in a boat, taking his turn at the oars.

It was a forlorn and bedraggled seventeen-year-old boy who stepped onto the wharf in Philadelphia. "I was in my working dress," Franklin says, "my best clothes being to come around by sea. I was dirty from my journey; my pockets were stuffed out with shirts and stockings, and I knew no soul nor where to look for lodging. I was hungry; and my whole stock of cash consisted of a Dutch dollar and about a shilling in copper."

The first thing he did was to hunt up a baker and ask for bread—"three pennyworth of any sort." He got "three great puffy rolls," and with a roll

under each arm and eating the third, he started up Market Street. On the way he passed, at her father's door, the girl who was to become his wife; but there was very little in his appearance that morning to attract admiring female glances, or to indicate that this comical youth was destined to do more for the development of Philadelphia than any other one person.

In one way, however, the Boston boy was very fortunate; he had learned his trade from a good workman, and learned it well. So he soon found work, with a printer by the name of Keimer.

There were only two printing shops in Philadelphia at that time, and neither could turn out very good work. Therefore, Governor Keith, when he learned of the boy's skill, suggested that Franklin set up a shop for himself. He promised the government business, and even offered to finance the project. On the strength of this proffered help, Ben took passage for England to procure an outfit, only to find at the end of his journey that the governor's promises were merely "bluff." It was a scurvy trick to play on a boy of eighteen!

Now there was nothing for Franklin to do but hunt up a job, while his dreams of becoming a master printer went "a-glimmering." He soon found a place with a good printer, and went to work industriously. After a year in this shop he got work with one of the best printing houses in London, and there received splendid training in the making of books.

It was at about this time that his skill in the water nearly led to his becoming a swimming instructor, for Sir William Wyndham offered excellent pay for teaching his two sons. Although a chance to return to America turned him away from a life as a professional swimmer, he never got over his love for the water. When eighty years old, he was in a hot salt-water bath when he fell asleep while floating on his back, and for a full hour peacefully slept and floated.

The return to his native land came at the end of eighteen months in London. A Quaker merchant, about to go back to Philadelphia, gave him a fine chance as confidential clerk, and he eagerly took it. Work in the store and office proved congenial, and he soon grew "expert in selling." It now appeared that his days as a printer were ended. But he was not to become a merchant; within a few months his employer died, and Ben was out of a job.

A skilled mechanic is seldom long without work, however, and Franklin was the best printer in Philadelphia. He was gladly taken back by his former employer, Keimer, and made superintendent of the shop.

But Franklin did not remain long an employee. In partnership with another of Keimer's men he soon started a small business of his own. This grew wonderfully, for Franklin's thorough knowledge of the printing trade, his skill, industry, and geniality brought much business to his shop. It was indeed

Courtesy of the Bostonian Society

The press and type cases upon which worked the great man who was proud of his success as a printer

his shop, for the partner proved incompetent and soon withdrew from the firm.

Experience with the *New England Courant* had given him an insight into newspaper work and now led him to try publishing. Under his direction and enlivened by his witty yet sensible writings, the *Pennsylvania Gazette* came to have the leading place among Philadelphia papers. But it was *Poor*

Richard's Almanack that gave him greatest fame as a publisher. Some one has said that American humor began with this publication. In it were gathered wise sayings from the writers of ages; but it was Franklin's genius and his keen sense of humor that made it a household treasure. It was translated into every language of Europe and went all over the civilized world. To it is credited much of the industry and thrift developed in the country people of America during the eighteenth century.

The step from publisher into public life was a natural one. "The leading men, seeing a newspaper now in the hands of one who could also handle a pen, thought it convenient to oblige and encourage me," Franklin says. This resulted in his being made public printer, and, a little later, clerk of the Assembly. He continued as clerk until chosen representative, and in the meantime he received appointment as postmaster of Philadelphia.

When only a little past forty years of age, Franklin took as a partner a competent young man with whom he had worked in London. Thereafter virtually his whole time was given to public affairs and scientific research; in this way more than half of a long life was devoted to the service of his country. For eighteen years, just prior to the Revolution, he was agent for Pennsylvania and other colonies, to present their grievances to George II and his successor, George III. During these troublesome years he tried not only to get their just rights for the

Photograph from Rene Bache

Franklin, with his grandson and daughter, entertaining friends in his garden

people he represented but to develop a better feeling between the mother country and her daughters across the ocean.

When it became useless and dangerous for him to remain longer in England, Franklin returned to America, and he had no more than landed when he was chosen delegate to the Continental Congress. There he had an important part in shaping the destinies of the colonies and in binding them into a body working each for all—"lest they hang separately."

At the age of seventy, when many men think their working life is over, Franklin undertook the journey to France to enlist the aid of that nation in support of the colonies. After accomplishing the

object of his visit, he remained to arrange a treaty of peace between England and America, and then stayed on as ambassador for the new nation. Not until he was almost eighty years of age was he allowed to relinquish his duties in Paris.

"The many-sided Franklin" is indeed an appropriate designation. Seldom is it granted to one man to distinguish himself in so many ways. It has taken volumes to tell of his achievements.

All are familiar with the famous experiments whereby he identified lightning with electricity, and his invention of the lightning rod. But that was a small part of his scientific work. He studied the effect of the Gulf Stream and plotted its course. He discovered the fact that storms progress against the wind. The effect of oil on troubled waters was first made known through him, and he proved his startling statement that rivers do not always run into the sea.

The beginning of heating by stoves came with Franklin's invention of the "Pennsylvania fireplace." He made for himself glasses with double lenses, that he need not change from one pair to another—the present "bi-focals." Many other inventions were due to his genius; but he would never take out a patent, for he said, "As we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others; and this we should do freely and generously." Thomas Jefferson once said, "You know the just esteem which attached itself to Dr. Franklin's science, because he always

endeavored to direct it to something useful in private life."

Franklin was also a musician of considerable ability. He played the violin, harp, and guitar, and after listening to music made on glasses filled to varying heights with water, he invented an instrument of glass which he called the "armonica."

Philadelphia owes so many things to the far-sightedness and public spirit of Franklin that it is impossible here to more than name a few of them. When he first went to the town he formed a debating society, called the Junto, which grew into the American Philosophical Society, and through which the public library was established. The first fire company, police system, and colonial militia of the province were organized by him. He arranged for street cleaning and lighting, and improved upon the lights generally used for street purposes. Owing to his suggestion and encouragement a hospital was established, and the University of Pennsylvania is a direct outgrowth from the academy he was instrumental in founding.

To the end of his eighty-four years, Franklin was proud of his success as a printer, and when he came to the writing of his will he began that document with: "I, Benjamin Franklin, Printer, late Minister Plenipotentiary from the United States of America to the Court of France, and now President of the State of Pennsylvania."

THE PRINTER'S SONG

J. C. PRINCE

Pick and click
Goes the type in the stick,
As the printer stands at his case;
His eyes glance quick, as his fingers pick
The type at a rapid pace;
And, one by one as the letters go,
Words are piled up, steady and slow.

Steady and slow
But still they grow,
And words of fire they soon will glow; —
Wonderful words, that without a sound
Traverse the earth to its utmost bound;—

Words that shall make
The tyrant quake,
And the fetters of the oppressed shall break;
Words that can crumble an army's might,
Or treble its strength in a righteous fight; —
Yet the type they look but leaden and dumb,
As he puts them in place with finger and thumb.

But the printer smiles,
As his work he beguiles
By chanting a song as the letters he piles,
With pick and click,
Like the world's chronometer, tick, tick, tick!

"Oh, where is the man with such simple tools
Can govern the world as I?
With a printing press, an iron stick,
And a little leaden die,
With paper of white, and ink of black,
I support the Right and the Wrong attack."

Say, where is he, or who may he be,
That can rival the printer's power?
To no monarchs that live the wall doth he give; —
Their sway lasts only an hour;
While the printer still grows, and God only knows
When his might shall cease to tower!

PAUL REVERE: GOLDSMITH

PARK PRESSEY

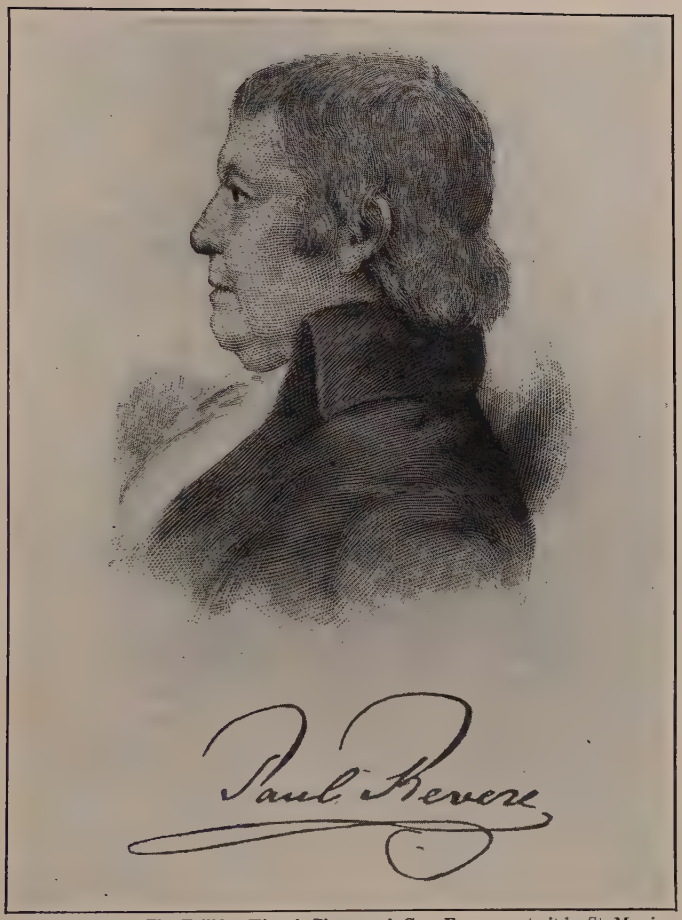
Many a boy has declaimed from a school platform that

On the eighteenth of April, in seventy-five,

a certain Paul Revere rode through the night until his cry of alarm spread

To every Middlesex village and farm.

But how many know whether the hero of the "midnight ride" ever merited praise in any other way? How many know what he did to earn a living in an everyday, prosaic world? For the subject of the poet's fancy was, in real life, a very substantial, very human person, with a large number of mouths to feed; and although romantic episodes are gratifying to future generations they do not, as



The Halliday Historic Photograph Co. From a portrait by St. Memin

PAUL REVERE

The hero of Lexington whose ability as a mechanic was of no less value to the cause of freedom than was his famous ride

a rule, help those immediately concerned to meet the "high cost of living."

Properly to appreciate the work of Paul Revere it is necessary to go back a generation or two, for in his case it is true not only that the "child was father to the man" but also that "the boy was the son of his father."

Paul's father was of a good old Huguenot family which had suffered hardship from the religious persecutions in France. In 1715, when a boy of thirteen, he was sent from his home in Guernsey to Boston to learn the goldsmith's trade. It was a long, slow journey by sailing vessel, but to a boy of thirteen every moment was interesting. In Boston he became apprentice to a goldsmith, took naturally to the work, and rapidly mastered the trade.

In his Huguenot home the boy's name was Apollos Rivoire, but this gave the people in the new country so much trouble that, when the time came to open a shop of his own, he called himself Paul Revere, "merely on account the bumpkins should pronounce it easier."

The Paul Revere of Lexington fame was the eldest son of the youth from Guernsey. He was destined to take up the work which his father came across the ocean to learn; but, through better education and greater opportunity, he was to carry it to far higher degree of excellence. After finishing at the old North Grammar School, he entered his father's shop and soon showed great ability and liking for the work. He had skill as an engraver,

Photograph by the Halliday Historic Photograph Co.

A Paul Revere bell which still rings praise of the man who did many things well

an important part of the trade, and good taste in designing. Many pieces of gold and silver—chains, necklaces, ewers, spoons, cups, and tankards—that bear the mark of Paul Revere are still treasured for their beauty as well as for their associations.

Revere's skill in handling the graver led him to take up the new enterprise of engraving on copper plate, a craft which at that time was, throughout the colonies, carried on by not more than a half dozen men. He studied this out for himself, and considering that the art was then crude at its best, he attained very good results. Pictures from his

plates had much to do with arousing patriotic spirit, for he was an ardent patriot, with a keen sense of humor, and the pictures turned to ridicule such obnoxious measures as the Stamp Act, the Port Bill, the tax on tea.

The engravings of Revere were not, however, confined to caricature, for he made views of Harvard College, the town of Boston, and portraits of Hancock and Adams. He engraved plates from which colonial notes were printed, and made a press for the printing. The first seal of the Commonwealth of Massachusetts was the work of his clever hands.

Courtesy of Mrs. Marsden J. Perry

This bowl was made by Paul Revere for the Sons of Liberty

With his good health, abundant energy, and especially his skill as a workman, Revere naturally became a leader in the meetings of Boston young men, "chiefly mechanics," which were held at the Green Dragon Tavern in the exciting times just before the Revolution. He was prominent among the "Sons of Liberty," and so became intimate with Warren, Hancock, the Adamses, and other zealous advocates of the colonies' rights.

From the records of the Masons, of which order Revere was a prominent member, and later Grand Master, we read: "Adjournment on account of the

few Brothers present. N.B. Consignment of Tea took the Brethren's time." This gives an interesting side-light on the stirring times of which Paul Revere was a part.

The next day after the famous "Tea Party," Revere set off on horseback to carry the news to the "Sons of Liberty" in New York and Philadelphia. During the days that followed this trip, he rode thousands of miles, through heat and cold, through sunshine and storm, as messenger from one colony to another and to the Continental Congress. Thus he was in good trim when the time came for the one ride which, through a poet's skill, was to make his name renowned forever.

In the fall of 1775 it became very difficult to get sufficient powder for the Continental army. There was only one powder mill, and that near Philadelphia. So the leaders of the cause in New England thought it would be a good plan for Revere, on one of his trips to the Quaker City, to learn how to make powder. They gave him letters of introduction to the mill owner, and these were indorsed by the most active patriots in Philadelphia. But the owner of the mill had no intention of giving up his monopoly; he absolutely refused to give any instruction. After long urging he did grudgingly grant permission for Revere to walk through the works, thinking, no doubt, that could do no harm. Little did he realize Revere's powers of observation and his ability to take full advantage of every opportunity. From what he saw that day, the

messenger from Massachusetts was able, on reaching home, to set up a mill and begin the manufacture of gunpowder.

Nearly all through the Revolution, Revere was in the service of the colonies. He was commissioned lieutenant colonel of the militia and for some time was in charge of Castle William in Boston Harbor. Of course he received pay for his later service, but much of his messenger work was purely voluntary. As one has said of him, "During all these years he had a large family dependent upon him; yet he was so constituted as to find sufficient leisure to interest himself with all matters pertaining to the public good."

After the war, Paul Revere went back to his shop. About this time he wrote his cousin in Guernsey: "I did intend to have gone wholly into trade, but the principal part of my interest I lent to the government, which I have not been able to withdraw; so I must content myself till I can do better." Thus we see that he intrusted his money as well as his service to the cause of liberty. However, he adds in the same letter, "I am in middling circumstances, and very well off for a tradesman."

The scope of his trade greatly enlarged through the natural demand that followed from his ability to meet need as it came. He opened a foundry for casting cannon, and soon added the business of bell making. Ever on the alert to learn something new, he was the first man in this country to make copper sufficiently malleable that it could be formed into spikes and rivets. He knew such a

Paul Revere silver presented to Edmund Hartt, builder of the U.S. Frigate "Boston." While nobly and constantly serving the cause of the Revolution, Paul Revere was supporting a large family with such handiwork as this

thing was possible, for it was being done in England, so he worked away at it until he discovered the secret—in time to furnish all the brass and copper work, "bolts, spikes, cogs, braces, pintles, sheaves, and pumps," for the building of *Old Ironsides*. He also mastered the art of rolling copper plate, and this same *Ironsides* went to her battle with the *Guerrière* covered with copper provided by Revere.

When the new State House was built in Boston, Revere furnished the six thousand feet of sheet copper required to cover the dome, while as Grand Master of the Grand Lodge of Masons he had an important part in laying the cornerstone.

In 1801 the copper works were removed to Canton, Massachusetts, and the business established there

by "Paul Revere & Son" continued to thrive until a very few years ago, when it was absorbed by a "combination." Yet nearly all the years of his active life the founder of this concern signed himself simply "Paul Revere, Goldsmith."

Photograph by the Halliday Historic Photograph Co.

Paul Revere's home for thirty years, now Boston's oldest house

Revere lived to be eighty-three years old, surviving all but five of his sixteen children. Even in his old age he lost little of his vigor and none of his stanch patriotism. When, in the War of 1812, it seemed probable that the enemy would make an attack upon Boston, the bold signature of Paul Revere headed a list of names of men who pledged their services in defense of the town, and it is supposed that he was the one to draw up the pledge.

About 1770 Revere bought a house in North Square, then a fashionable part of Boston, and this was his home for thirty years. In connection with his selling off a small part of the land, there is this quaint statement, written by the purchaser and attached to the deed:

> This is to tell them that ones [owns] this a state [estate] after me that Paul Revere have Bult a Barn & set the Barn on my Land one feet which he Is to Remove Whenever the Person that ones this Land shall Desire him or them that ones his Land after him.

The barn disappeared many years ago, but we do not know whether it was ever removed "one feet" by "them that ones this a state." The house, a hundred years old when Revere bought it, is still standing. Each year it is visited by thousands of persons from all parts of the country.

To this day several church bells remain, as good as when cast, to ring their praise of Paul Revere's careful workmanship—their honor to the man who did everything well.—From *St. Nicholas*

THE SONG OF STEAM

G. W. CUTTER

Harness me down with your iron bands,
  Be sure of your curb and rein,
For I scorn the strength of your puny hands
  As a tempest scorns a chain.
How I laughed as I lay concealed from sight
  For many a countless hour,
At the childish boasts of human might,
  And the pride of human power!

When I saw an army upon the land,
  A navy upon the seas,
Creeping along, a snail-like band,
  Or waiting the wayward breeze;
When I marked the peasant faintly reel
  With the toil that he daily bore,
As he feebly turned the tardy wheel,
  Or tugged at the weary oar;

When I measured the panting courser's speed,
  The flight of the carrier dove,
As they bore the law a king decreed,
  Or the lines of impatient love,
I could but think how the world would feel,
  As these were outstripped afar,
When I should be bound to the rushing keel,
  Or chained to the flying car.

Ha! ha! ha! they found me at last,
  They invited me forth at length,
And I rushed to my throne with a thunder blast,
  And laughed in my iron strength!
Oh, then ye saw a wondrous change
  On the earth and ocean wide,
Where now my fiery armies range,
  Nor wait for wind or tide!

Hurrah! hurrah! the water o'er
  The mountain's steep decline;
Time—space—have yielded to my power:
  The world, the world is mine!

The rivers the sun hath earliest blest,
  Or those where his beams decline,
The giant streams of the queenly West,
  Or the Orient floods divine.

The ocean pales wherever I sweep
  To hear my strength rejoice,
And monsters of the briny deep
  Cower trembling at my voice.
I carry the wealth of the lord of earth,
  The thoughts of his godlike mind;
The wind lags after my going forth,
  The lightning is left behind.

In the darksome depths of the fathomless mine
  My tireless arm doth play,
Where the rocks ne'er saw the sun's decline
  Or the dawn of the glorious day;
I bring earth's glittering jewels up
  From the hidden caves below,
And I make the fountain's granite cup
  With a crystal gush o'erflow.

I blow the bellows, I forge the steel,
  In all the shops of trade;
I hammer the ore and turn the wheel
  Where my arms of strength are made;
I manage the furnace, the mill, the mint,
  I carry, I spin, I weave,
And all my doings I put into print
  On every Saturday eve.

I've no muscles to weary, no brains to decay,
  No bones to be laid on the shelf,
And soon I intend you may go and play,
  While I manage the world myself.
But harness me down with your iron bands,
  Be sure of your curb and rein,
For I scorn the strength of your puny hands
  As the tempest scorns the chain.

THE MAN WHO CHEAPENED TACKS

ADAPTED

Thomas Blanchard is best known as the man who invented the lathe which turns gunstocks, shoe lasts, and all sorts of wooden objects which cannot be made on a common lathe. In fact, when Blanchard was trying to get Congress to give him a special patent, he set his machine to making busts in oak of prominent statesmen, until, as was said, "he quite turned the heads of the legislators," and got them to vote as he wished.

His talent for contriving and building showed almost from his cradle. When he was only ten he whittled out a tiny mill which went either by wind or by water; and he was never so happy as when work and lessons were done and he could take up knife or chisel.

There was little in the boy's home or neighborhood to encourage a budding mechanic. His father was a farmer who cared nothing for tools or machinery. The nearest blacksmith's shop was six miles

away, and seldom indeed was the boy allowed to visit it.

One day, however, his father did take him to see a horse shod. Then for the first time young Blanchard saw a smith weld two pieces of iron together as if they were mere dough on a baking board. Why not, he thought, repeat the marvel at home?

There was an old shed belonging to his father, once used for weaving but now cumbered with hoes and harrows, plows and spades, both old and new. In one corner lay a heap of scrap iron, from which the lad chose pieces likely to be useful. With stones and bricks picked up in the farmyard, he built a little forge like the blacksmith's. For fuel, when his mother's back was turned, he took the charred sticks from the kitchen grate, drenched them with water, and stored them away to dry. For anvil, he used a large iron wedge firmly driven into a log.

When these preparations were well under way Thomas heard joyful news. His father and mother were to drive next morning to visit a friend twenty miles away. While they were gone he could weld all the iron he liked.

Hardly were the old people out of sight before the boy had his fire lighted and was plying a bellows at the little forge. In a few minutes the iron scraps had begun to soften in the fierce blaze, and the delighted boy was bending and twisting and shaping them into any form he pleased.

But to weld the pieces together proved beyond his power. No heating or hammering would make

them stick, and Thomas saw to his dismay that the art of welding iron is by no means so easy as it looks, and that he must call a second time on the blacksmith.

As the lad stood woefully surveying his work, in strode his father, who, seeing the smoke and fire, had hurried back to find out what it all meant. But when the father saw how much pluck and ingenuity his son had shown, he had not the heart to punish the lad but let him off with a scolding. Better still, he decided that if the boy was born to be a mechanic, there was no use in trying to make a farmer of him.

"Well, my boy," he said, "learn blacksmithing if you like. Only learn it thoroughly, and never let a job leave your hands unless it is the best you can do."

So Thomas learned the blacksmith's trade; and after his apprenticeship was over, went to work for his elder brother Steven.

Steven had a shop in a neighboring town, where he kept twenty men and boys busy making tacks. At that time, early in the nineteenth century, all such work was done by hand. Each tack, no matter how small, was sharpened separately on an anvil. Then it was set in a vice, and the head formed by blows of a light hammer. The work was very tedious, and even the best workman could make so small a number of tacks in a day that of necessity his wages were small, also. Moreover, one workman out of the twenty had to spend all his time counting the

Photograph by Eugene J. Hall

The country blacksmith of former times worked laboriously and long to make tacks that are now turned out by hundreds in less time than it takes to wink an eye

finished tacks and putting them up, a hundred in a package.

Thomas' work was to head the tacks. But the monotonous toil soon disgusted the clever lad. The first thing he did was to invent a machine for counting tacks which rang a bell as each hundredth tack was formed. By this means, the man who had been counting tacks was set free to make them, and the profits of the shop were so much to the good.

Blanchard then proposed to make a machine to

head the tacks. But his brother would not listen. "It takes a knack," he said, "to make a tack. No machine can do it."

Nevertheless, Blanchard, who was then eighteen, began to build his machine. He went from place to place, working at one shop and another, and wherever he worked at his trade he had his machine with him; and every spare moment he could find he spent in improving it.

Six years it took him to make a model that he was willing to show his brother. He assembled his family, and started his machine. Thirty tacks a second it turned out, all alike and all with far better points and heads than the best workman could make by hand.

Blanchard sold his patent for five thousand dollars. This was much less than it was worth, for the purchaser, getting his tacks made nearly two thousand to the minute, shrewdly marketed them without telling that they were machine made, and got the price of hand-made goods. Naturally, he made money.

To-day, of course, everybody knows that tacks are machine made, and will pay only a few cents a hundred for them. Meanwhile the invention has been improved until it now turns out nearly fifty tacks a second, while a man and a boy can between them run twelve machines at once.

Five hundred tacks a second is, then, the rate for one man and a helper. Actually, thanks to Thomas Blanchard, a workman makes more tacks

while he winks his eye once than he could have made in a whole hour a hundred years ago.

Blanchard lived to be an old man and made many other profitable inventions—among them a machine for putting the bend into plow handles and hockey sticks.

—Adapted from *Leading American Inventors*

THE STORY OF THE HEAVY-GUN POINTER

GEORGE FLINT

I was fourteen when my father's death put an end to all hope of further schooling, and set me looking about for some way to make a living.

The more I thought things over, the more sure I became that whatever I did, I did not want to work in the city. To be shut up for life in a town shop between brick walls seemed to me to make life not worth living. And yet, though brought up in the country, I did not want to farm. So far as I could make out, my keenest interest was in tools and machinery. Always, from a little lad, all the broken door latches and balky clocks of the household had been turned over to me; while I don't suppose there is one boys' plaything from a windmill to a sled that I had not made.

Why not, then, become an all-round machinist, and set up a little shop either in my own home village or in one near by? The region had begun to attract summer people, and these were bringing their automobiles. The farmers were buying every

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The interest of these men in machinery is being put to good use in service for the country

year more and more farm machinery. There would always be bicycles and wagons. Thus, with the help of my elders and a teacher who took an interest in me, I planned out my life.

But, unfortunately, setting up shop demands capital. Save as I might, I should be twenty-five before I got my start.

Finally, after much taking counsel, I hit upon this plan. I would enter the United States Navy as young as they would take me, and save my pay. The navy, if I wished, would teach me a trade—there should be no question which. In a great floating machine shop, which a modern warship is, I would go about and see the world. At twenty-one I should be free to go ashore.

All fell out as I planned. I enlisted at fifteen, spent six months at the Newport training school for apprentices, and then was promoted to a training

ship. Before I was seventeen I had become a full-fledged deep-sea sailor man and was serving on one of the finest armored cruisers which my "Uncle Samuel" owns.

What an experience it was for a country lad who had never so much as seen the ocean! There is not a large port in Europe that I have not visited, there is not a continent on earth that I have not seen. Of all ways of learning geography, none compares with this!

Pay in the navy is low—but there are almost no expenses. Even these I cut down still farther by making my own clothes, besides earning many an odd dollar doing sewing for those of my mates whose fingers were all thumbs. Every time I came home from a voyage I added another deposit to the tidy little sum that I was salting down toward the new shop.

My special interest, as I have said, was in machinery. And of all the machines on the great floating shop none seemed so interesting to me as the guns. I soon became a devoted student and lover of the huge steel tubes. None on the ship cleaned and polished his charge more faithfully, none was more alert at drill.

In the navy everybody on board ship, no matter what his other duties, has to learn to handle the guns. Cooks, electricians, firemen—no matter what else they do—are taught to use the fighting tools for whose sake the ship exists.

On the trying-out for marksmanship, I stood

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Deck view of the U.S. Battleship "Minnesota." Boys who delight in plugging a tomato can across the yard would find real sport in aiming and firing a rifle like one of these

well to the front. I had always been fond of hunting, and I had the nerves of an eight-day clock. My shots with the smaller guns hit. I was promoted to larger and larger bores, while with each promotion my enthusiasm grew. I became an expert "heavy-gun pointer."

Sport? It's not bad fun plugging a "twenty-two" at a tomato can on a fence post across the yard. I have done it by the half hour. I have also fired at an armored target with an eight-inch rifle and a two-hundred-pound steel-jacketed shot that could have plowed its way the whole length of a brick

block and knocked down a lamp-post on the other side. That was gunnery!

For all that, I wish most heartily that I had never put eye to gun sight. I started out with a thoroughly sound plan for my life work—and I failed to carry it through. I started out to learn the machinist's trade—and I ended by becoming a gunner. Now, having passed twenty-one, I am back on shore. I have started my little shop, but I have only half learned the trade to practice in it. I don't want to follow the sea all my days; nobody on shore wants to hire me to drop eight-inch shells through roofs of the neighboring towns. Doubtless, if there should be a war before I get too old, my training as a big-gun pointer might possibly be useful to my country; but for the present it is certainly no use to me. In itself it is good, but it does not fit in with the rest of my life plan.

THE FREIGHT TRAIN

CY WARMAN

How I love to watch the local winding up around
the hill,
In the sunrise of the morning, when the autumn
air is still
And the smoke, like loosened tresses, floats away
above her back,
And to listen to the measured Choo-ka, Choo-ka,
of the stack.

The man who rides these mountains, whose fiery steed of steel
Drinks of Nature's flowing fountains, must inevitably feel
A divine and peerless painter spread the scenes along the track
As he listens to the Choo-ka, Choo-ka, Choo-ka, of the stack.

In the peaceful hush of midnight, when his pilot plows the gloom,
From a hundred hills wild roses send their subtle, sweet perfume
To the wary, weary watcher, whose lamps light up the track,
And a hundred hills give back the Choo-ka, Choo-ka, of the stack.

Ah, how I miss the music of the whistle and the bell,
And the breathing of the air-pump, more than any tongue can tell;
And the mighty, massive Mogul seems to try to call me back,
With her Choo-ka, Choo-ka, Choo-ka, Choo-ka, Choo-ka of the stack.

WHEN YOUNG WITS CLASHED

FREDERICK M. HOLMES

"Can't you get along faster, Gus?" asked the big man in the back of the car, nervously closing his watch with a loud snap.

"I 'm running as fast as I dare, Mr. Mason."

"But we 're only doing eighteen miles; we did thirty before we left the main road for this short cut of yours."

"The car is n't running so well now," replied the chauffeur, with a sly grimace. "I don't dare to force it until we strike the turnpike."

"How far ahead is that?"

"Some distance—ten miles, perhaps." Again the concealed grimace. Evidently the anxiety of his employer did not trouble the chauffeur.

"That stockholders' meeting in Penfield is at two," reminded Mason, anxiously, "and I 'm morally sure that if I am not there I shall lose control of the company I 've spent my life in building up. I 'm sorry now I tried to make the eighty miles across country in the car instead of taking the train. There 's a group of men who are trying to get the control away from—" He broke off in dismay, for there were several sharp reports and the car stopped.

In an instant the chauffeur was on the ground and, throwing open the hood, he began working swiftly around the engine.

"Sit right there, Mr. Mason," he exclaimed. "I 'll have it all right in five minutes and shall be able to put on the fast speed; but I shall have to run to this house ahead and get some water."

Taking a small pail, he started for the house and in two minutes had passed out of sight.

Mason waited impatiently. "Must have had a

lot of trouble getting that water," he muttered, finally. He waited longer; then he took out the watch again and gave an exclamation of surprise. It was ten minutes since the chauffeur had disappeared.

Down the road near the house a boy of about sixteen appeared, looked up, saw the car, and stopped. Mason called and he approached.

"What is your name?" asked the man.

"George Howard."

"Mine 's Mason," volunteered his questioner. "Have you seen anything of a young man going to that house after water?"

"I saw a young man go by, but he did n't stop or say anything about getting any water."

"What!" cried Mason, "he did n't stop?"

"No, sir, he left a pail near the house and went on to the corner just below here and got into an automobile that stood at the crossroads, and it started away at once."

"It 's a plot!" burst out Mason; "it 's a plot to get me out of the way at that meeting! That 's why the trouble did n't begin until we left the main road. Well, I 'll fool them; I can drive the car myself."

Stepping out quickly, Mr. Mason replaced the hood and went to start the engine. He tried several times before the truth broke on him. For an instant he turned pale and leaned heavily against the car. "The miserable scoundrel," he groaned; "he 's put the engine out of business. Do you know anything about an automobile, son?"

"Not very much," admitted George, "I never

drove one, though I 've always wanted to; but I 've helped around them a good deal and put in new plugs and things like that."

"Then you know more than I do," commented Mason. "I never thought I had time to learn anything beyond how to turn on the gasoline and run the thing over the road. That 's why I got a chauffeur."

Together they uncovered the engine and began a hasty examination to locate the trouble.

Entirely unaccustomed to the machine, Mason was still dubiously examining all sorts of possible and impossible seats of trouble, when a sharp cry from the boy drew him from his task.

"What is it?" he asked.

"Look!" cried George.

The man's eyes followed the direction of the boy's finger, but even then he saw nothing and was forced to ask what it was.

"Look at these springs," said George, touching them as he spoke; and Mason saw that each one of them had been very neatly cut.

"What are they?" he inquired helplessly.

"They are the inlet valve springs," answered the boy; "they allow the gas to enter the cylinders at the right time."

"Then they are extras," remarked Mason, brightening up; "and we must have lots of them, for Gus was always bringing me in big bills for all sorts of extras. Just hand them out."

George opened up the tools and extras and

Mason made a hasty clutch as a number of coiled springs met his eye. "We 'll fool them yet," he said, "if we can only get these things on."

"I know how to put them on," asserted the boy.

"Then get busy and I 'll make it well worth your while."

Working rapidly, the boy removed the old cut springs and made ready to put on the new ones. Mason handed him one.

"Not that," said George, "one of the others."

"Well, I don't care which you use; only get them on and let me get away."

"I can't use this, either; they are both alike. You see they are too heavy," George explained, "they are exhaust valve springs; the inlet valve springs are light."

Mason began rummaging again for the other springs, and George, joining him, realized the situation before the man sprang to his feet and shook his clinched fist in the direction in which the missing chauffeur had disappeared. "Oh, you 're a cunning rogue!" he cried; "there is n't an inlet valve spring left!" Then he turned in desperation. "Put on the other springs," he ordered.

George shook his head. "It 's no use," he replied earnestly, "it really is n't; they are so heavy they won't work."

"But what am I going to do?" asked the man, more of himself than of his young companion. "I can see the whole plot now, but what good is that? If I cannot reach that meeting they will do just

what they wish to; and the control of the business to which I have given my whole lifetime will be swept away by a contemptible trick. Have your folks a car?"

"No, sir, there is n't one within several miles."

"Then there is one within a few miles?"

"Yes, sir."

"Big motor?"

"No, sir, about thirty horse-power."

"Got a telephone at your house?"

"Yes, sir."

"Come on!" cried Mason, "we 've a chance yet."

They rushed to the house, and the boy quickly explained the situation to his mother.

Mason passed hurriedly in, but George remained outside, thinking. In a minute he went to a woodshed near the door, where he had a corner devoted to the construction of various mechanical devices so dear to the heart of the average healthy boy.

He was here when, a few minutes later, Mr. Mason came out again, his face looking older and more drawn than when he went in so short a time before. The man tried to smile as he saw George, but failed.

"I want to thank you, my boy," he said slowly, "for the efforts you have made to help me; and I shall never forget them, I assure you. I can't say very much just now; a man does n't feel like talking when he is losing the fruits of a lifetime's work."

"What 's the matter?" inquired the boy, sympathetically, "can't you get the car?"

"The matter is," answered Mason, "that I did n't

realize until it was too late the almost matchless cunning of that young man whom I trusted and benefited. He has not overlooked a single point."

"He has prevented your getting that car?"

"Worse than that; he has prevented my getting any car—or any assistance in time. I am practically tied hand and foot—helpless. He has cut the telephone line!"

George started and a light came in his eyes.

"I suppose I might as well try and get some one to pull that car to the nearest garage," continued the man, gloomily.

"Wait just a minute, Mr. Mason," urged George, "I think I can get some one to attend to it for you."

Mason came and stood at the door while George busied himself in his own particular corner.

"What would a good big automobile be worth to you just now?" asked the boy, as he worked away.

There was no interest in the man's eyes as he replied, "Almost any price, George."

"I wish I could help you out."

"I wish you could; but that rogue was too clever—he did not overlook a single point."

"Yes, Mr. Mason," said George, gathering up the little objects upon which he had been working, "he did overlook one point; but he could not have been expected to know that."

"What was it?"

"Why," answered the boy, "he did not know that I had spring wire and could make a set of inlet valve springs."

"What!" gasped Mason.

"Oh, yes," confirmed George, "making springs is easy; I 've made lots for different things, and I had these old ones for patterns. I can't see how I came to forget about it so long. Let 's put 'em on."

Mason needed no urging, and they were soon properly placed and the hood shut down. To the man's delight the engine started promptly and he sprang into the car. "Good-by!" he cried, "I won't forget you."

Then he stopped. "Come here; get in," he said, "you 'll have to help me out again, after all."

"What is the matter now?" asked George.

"I don't know this part of the country," explained Mason.

"Well, I 'll show you where to go," laughed George.

"Gee!" he cried, a short time later, as he watched the speedometer, "the pointer is just passing the forty-mile mark."

"Just you wait until we strike the turnpike, son," commented Mason, "and you 'll see it pass the fifty mark."

Just before two, as they were tearing into Penfield, they swept by another car in which were several persons. Following Mason's glance, George saw the white face of the former chauffeur among them. He looked behind and in a minute exclaimed, "That automobile we just passed has stopped and turned, and is going back."

Mason smiled grimly. "I don't think they are as anxious to get to that meeting as they were," he remarked; "and, as they have taken my chauffeur, I suppose I shall have to get another. How would you like the job, George?"

George's eyes glistened. "Fine," he replied, "but I don't know enough about it yet."

"You can learn if you have a chance," said Mr. Mason, decisively, "and I 'll see that you get the chance."

And this remark explains why George is now driving the big car. —From *The Beacon*

LINES ON THE DEATH OF A WORTHY SHOEMAKER

ED MOTT

My friend the agèd Crispin's dead.
  Drawn to its utmost tax
His thread of life asunder snapped
  For lack of vital wax.

A man was he of gentle parts,
  Beloved of young and old.
Though true he ne'er sold half his goods,
  Yet they were oft half soled.

Though paradoxical it seems,
  And of a doubtful cast,
Yet when unto his toil he went
  His first thought was his last.

"All work, no play, makes one but dull,"
  Words of the proverb say,
Thus he was never dull because
  Awl work to him was play.

Boots though his task, bootless it was
  To gather worldly pelf,
So though he others kept well heeled
  He ne'er was so himself.

Peace be his rest! And when around
  The day of judgment rolls,
As free from flaws may be his soul
  As ever were his soles!

—*New York Sun*

THE VALUE OF HOME TRAINING

At the age of six or seven years, like all healthy boys, I asked father for toys. On one occasion I said, "I want a top." He said, "Make it. Mother will give you a spool and here is my pocket-knife. Go ahead." I whittled for a few minutes and found the cutting difficult. I returned the knife to father, and he asked, "Where is the top?" I said, "I do not want a top." He replied, "You do want a top. Make it or I shall be obliged to punish you." I was so well acquainted with my father that I made the top. When I returned his knife he commended me by spinning it and remarking, "That is a fine top." My father built better than he knew. He put lime in my spine by insisting that I make my own carts,

wagons, sleds, kites, boats, windmills, etc., and that I finish every task I voluntarily began.

When I was older I, like most boys, preferred fishing, hunting, swimming, playing ball, to work. My father needed my help; consequently I worked—not because I wanted to work, but because I had to. He trained me in obedience. When he said, "Come," I came; when he said, "Go," I went; when he said, "Work," I worked; when he said, "You can play," I played.

My father never gave me a nickel in his life. He gave me an opportunity to earn nickels. I took delight in earning my own pin-money. Because of this training I never saw a day in my life when I could not get some kind of useful work to do. This home training in practical thrift has proved to be a rich legacy to me.

On the one hundred-acre hill farm in southern New York I was trained for the struggles of life. Through the untiring efforts of mother and father I learned the fine arts of industry, self-sacrifice, self-reliance, honesty, sobriety, economy, and abiding loyalty to my parents and my sisters. There is no short cut in the art of making men and women out of our boys and girls. The fundamentals I have enumerated are absolutely necessary in giving boys real joy. My home training has been the key to my success. Father and mother were my great teachers.

—*Governor W. N. Ferris of Michigan,*
in *Association Men*

HOME-MAKING

SALLY PATTON'S QUIET DAY

FRANCES MARGARET FOX

It was not unusual for Sally Patton, a farmer's daughter, to get up early in the morning. But when, without waiting for the August sun to rise, she was out sweeping the porch, it meant that Sally had something out of the ordinary to do that day.

"What's in the wind, Sally?" Tom, on his way to milk the cows, found his sister shaking rugs in the back yard. "I thought you were going to stay at home to-day."

"I am, but I want to get the housework done and have everything in apple-pie order by nine o'clock, so that I can sew. It's a great chance to make my white batiste to wear to Mrs. Shipman's rag-carpet bee next Wednesday. You see, with you men folks all over at Uncle Peter's, helping him thresh, I shall have a quiet day. Mother is going to help me, too."

"Pshaw, now, Sally, don't keep mother at home, when she might just as well spend the day with Aunt—"

"Oh, go along, you goose! She is to sew lace on ruffles, and offered to take them to Aunt Becky's for pick-up work."

By seven o'clock Sally's father, mother, and two brothers were ready to start.

"Don't plow the clover lot down beyond the

barn," was Tom's parting pleasantry. "I'd hate to come home and find that field ready for winter wheat!"

"If you don't mind," said Sally, laughing, "I'll make my new dress first."

"Don't be lonesome!" her mother called from the driveway. Sally replied that she would not have time. In a way that was unexpected, this remark proved true.

Alone in the house, Sally hastily cleared the breakfast table and began washing dishes. All at once the stillness of the farmyard was broken by the sound of energetic grunting. The sound came from just outside the kitchen door.

"Oomph! oomph! oomph!"

"Oh, you old black pig!" exclaimed Sally. "How did you ever get out of the field?"

"Oomph! oomph! oomph!" Sally rushed out in the direction of the "oomphs."

"You horrid old thing! Come, piggy, pig, pig; come, piggy, pig, pig; nice old pig!"

The pig would not come, however. It dug its sharp hoofs in the earth and capered round the yard. It had been at large in a field for several days, and may have been trying to imitate the colts that had been its companions.

In vain Sally looked for the pig's place of escape. At last she concluded that it must have crawled under the fence near the Baldwin apple tree in the back yard. There was nothing to do but go down the road, open the gate, and get the pig back into

the field. The pig objected to being chased; it ducked, it dodged, it pawed the earth, it ran, squealing, in every direction, but it always avoided the gate.

If the colts had not scented freedom when the gate was opened, Sally's task would have been easier. Whenever she had the pig in front of the gate, and it seemed as if he must go in, the colts tried to come out. Each time she was compelled to drive them away, and thus lost her opportunity. After wasting half an hour, Sally mopped her face and gave up trying to drive the pig.

Then Sally resorted to strategy. "I'll coax you with the sour milk we were saving for Dutch cheese!" she exclaimed.

Squealing at every step, the pig followed Sally and a pail of sour milk to the gate; but although the girl let the pig stick its ungrateful snout into the pail, the animal would not go one inch beyond the grassy threshold.

"Oomph! oomph! oomph!" it lifted its head to remark. Doubtless it had been too well fed that morning to be tempted by sour milk.

Finally she tried apples, cut in quarters.

"It is such joy," she said, "to cut up apples this morning for an undeserving animal like you! Come, piggy, pig, pig; nice old piggy, pig, pig!"

The apples accomplished what the milk had failed to do. In an unpleasant frame of mind, Sally returned at last to her cold dishwater. She heated fresh water, and had nearly finished the dishes,

when she heard the sound of vigorous protest from the hens. The girl rushed out, and saw a hawk circling in the air.

"That's all right, old ladies," Sally assured the perturbed fowls. "I haven't anything to do this morning but watch and protect your children. A nurse girl at your service, madam!" The last remark she addressed to a particularly flustered white mother hen.

When the danger from the hawk was past, Sally returned to the house. "Nine o'clock this minute!" she exclaimed, as she went by the clock in the dining room. "This room and the kitchen yet to sweep, the kitchen floor to scrub and the beds to make!"

Half an hour later all the housework except the scrubbing was done. Then an animal known by the children who attended the district school as "Patton's hooking cow" came near hanging herself by the rope with which she was tied to a maple tree. Sally heard a muffled bellowing, and ran to the rescue of the creature.

This task was harder than capturing the obstinate black pig had been, but at last she got the rope untangled. Having saved the cow, Sally returned, exhausted, to the house.

"You'll have to wait," she remarked to the kitchen floor. She put more wood in the stove to keep the water hot, and then threw herself upon the couch in the sitting room, and fell asleep.

She was awakened by the wailing of a baby. Sitting bolt upright at the sound, Sally asked

herself if she were dreaming. No, there was the cry again. Across the road, in the shade of a clump of maples, was the baby, lying on a blanket. On their knees beside it were two young women. A man with his hands thrust helplessly into his pockets stood near. Close by was a light wagon, and two horses were hitched to the fence. Sally quickly guessed that the baby must be ill, and ran to offer help.

"Yes," said the mother, "baby certainly is sick, but we don't know what is the matter. We are the Petersons from over north—this is Mr. Fred Peterson, my husband, and this is Miss Peterson, his sister. We left home day before yesterday, to go to my mother's at Rawson Corners. We thought we were going to have such a delightful camping trip, but baby did n't seem right yesterday, and now he seems worse. Last night we camped only a mile below here, and we were trying this morning to get to your schoolhouse woods for the rest of the day before the sun should get hot, but we did n't dare go on with baby. This is the fourth time we have stopped and tied the horses."

While she was talking, the mother held her ten months' old baby. It cried continuously.

Sally knew little about babies, but she ventured a suggestion. "I believe," she said, "that that baby is going to have spasms!"

"O mercy!" exclaimed the mother.

"Oh, no, no, no!" the aunt protested.

"Did you ever see a baby have spasms?" inquired Sally.

"No, but I had spasms myself once, and I remember what my mother says they did with me. They put me in hot water. O Miss —"

"Patton, Sally Patton."

"Miss Patton, have you any hot water?"

"Yes, a tubful of clean hot water. Come right up to the kitchen."

The baby was undressed and put into the tub of warm water. Soon he stopped crying and began to smile and coo.

"Well, if it's spasms, he's cured already," said Sally. "The little darling!"

Tears began rolling down the mother's cheeks. "He surely seems all right. I believe the little fellow is tired out by the sun and by the change in his habits. I'm afraid he is too young to go camping. We'll dress him and get to the woods as fast as we can."

"Indeed," objected Sally, "you'll do no such thing. You take that baby into the cool parlor bedroom and have a nap. I know how hot the sun is to-day. You can't stir out until it is cooler. Mr. Peterson can put his horses in the barn, and by the time you are all rested I'll have dinner ready."

It was a good dinner that the only daughter of Isaac Patton served to her unexpected guests that day. And it was a merry party that gathered round the table.

The baby awoke in time to amuse hostess and guests for an hour following dessert. They sat on the floor with him in the cool parlor, forgetful of

everything but his infant perfections, until Mrs. Peterson remarked that perhaps Sally had plans for the afternoon.

"We'll get the dishes out of the way," Mrs. Peterson continued, "and then we will gladly help you with anything you wish. Were n't you intending to can fruit, or make jelly, or —"

"Or plow my brother's clover lot by the barn?" asked Sally, laughing. "No, I thank you. I am enjoying every minute of this visit, and I only wish my family were home to share the pleasure."

"Well, I must go and see about the horses," declared Mr. Peterson, "and I may stretch out and take a nap under the trees."

At five o'clock the Petersons resumed their journey. When they had gone, Sally discovered how Mr. Peterson had looked after his horses and taken a nap. Those horses, with their owner's assistance, had plowed Tom's small clover field.

"That's what I call a joke on me!" murmured Sally Patton. "Tom's work done and my batiste untouched! A pretty good joke on me!"

—From *The Youth's Companion*

THE HOUSEWIFE WHO BUILT A TELESCOPE

EDWIN T. BREWSTER

In western Pennsylvania, thirty miles or so south of Pittsburgh, is the little town of Brownsville. Here, shortly after 1840, was born Phœbe

Courtesy of John A. Brashear

PHŒBE BRASHEAR

The housewife whose energy and perseverance inspired and encouraged her husband to build his first telescope and then to become eminent as a maker of astronomical instruments

Stewart, and here she grew up, a simple country girl, hard-working, frugal, and poor.

By the time she was twenty Phœbe Stewart had married a lad of the village as poor and as frugal as herself, and as Mrs. John Brashear had gone with her husband to Pittsburgh in search of fortune. Fortune took the form of a job in a rolling mill, where the husband was expected to work at least ten hours a day, and then to keep on as long as there was anything left to be done, for Brashear was a millwright, who had to keep tools in order for the work of other people.

The Brashears were ambitious. They wanted a home of their own; and being too poor to buy a house, they went to work and built one with their own hands. Not satisfied with that, they added a little machine shop, with a tiny steam engine, in order that when John Brashear had finished his ten hours of work over other people's lathes and pulleys, he might play evenings with his own.

Neither husband nor wife had had much education, so when they were too tired to work they studied. The husband took his books to the mill and read at odd moments. The wife kept up with him in her spare time at home. Evenings, they read together.

Their special interest was astronomy, for John Brashear, when he was a lad of eight, happened to get a chance to look through a telescope. After that, the wonders of the heavens eclipsed all else in his imagination, and all he knew he forthwith taught his wife.

But one cannot learn a science from books alone.

The Brashears wanted a telescope. They could not hope to buy one; they were far too poor. So they went to work to make one instead.

Together, in their little shop, they turned the brass and ground the lenses. Every day, while her husband was at the rolling mill, Phœbe Brashear cleaned and oiled the little engine, set the shop in order, and made ready the tools and materials for the evening's work. Along with getting supper she got up steam in the boiler; and when supper was done she worked at her husband's side, oftentimes till midnight. Next morning she was up with the five o'clock whistle getting breakfast; and whenever she could snatch an hour or two during the day she started the machinery and went to work by herself. Few men were better mechanics.

Lens grinding is very slow and difficult work. The least particle of grit on the glass will ruin the labor of months, so that John Brashear, when he came home from the mill, used every day to wash his hair as well as his hands and face lest any grime should fall on his work. Three years it took them to make their five-inch glass. Eight years after their marriage, the Brashears set up their first telescope in the attic of their cottage, cut a hole in the roof, and invited their neighbors to come in and have a look at the planet Saturn.

Other housekeepers, as they become more prosperous, aspire to larger houses. Phœbe Brashear wanted a larger telescope. Five inches is by no means a small glass; but she planned for a twelve.

It took only two years to make that, for the Brashears were getting skillful. But just as the glass was finished, it broke.

The husband was completely discouraged. He went back to the mill, resolved to try no more. Not so the gallant wife. "Never mind," she said, "next time we'll make a better one." And the very next night when the husband came home from work, he found the best of suppers awaiting him, steam up in the engine as usual, and a fresh block of glass in the lathe.

What can a man not do with such a wife! The discouraged husband took heart again, and this time the work went through to completion. The little cottage attic held as large a telescope as several famous observatories.

This was the turning-point of the family career. The Brashears were becoming known, both for their skill in grinding lenses and for the discoveries which they made with their telescopes. By and by the Allegheny Observatory, which is just across the river from Pittsburgh, began to send them repair work which up to that time had been done in Paris. It was not long before the Brashears were putting an instrument in order and getting it back the same day in better order than if it had been away a month and twice across the ocean.

With more experience came more skill, and more work. Twenty-one years after John Brashear entered the rolling mill, he left it to set up a little shop for the manufacture and repair of telescope

lenses and other optical instruments. For twenty-one years Phœbe Brashear held her husband to doing two days' work in one, until she set him free to do only the work he loved.

The business grew. "The little shop under the hill" became one of the famous optical factories of the world. There is not an important observatory in America or Europe that has not at least one of its instruments. Langley, who constructed the first aëroplane that ever actually flew, had his models made at the Brashear shop. Here were ground the glasses for the range-finders which our navy used in the Spanish War. They were, at the time, the most accurate range-finders in the world—one may guess how much part they had in two memorable victories. There is only one telescope anywhere larger than one recently made by the Brashear Company for the Allegheny Observatory.

Phœbe Brashear lived to see her husband director of a great observatory, a professor of the University of Pittsburgh, and for a time its acting head, trustee of educational funds amounting to more than twenty millions. At her table sat men of science, the most eminent of the day, while visitors came to her house from almost every country of the earth. She believed in her husband's future when he was only a millhand, and she helped him to become the foremost living maker of astronomical instruments. On her death, in 1910, the world acclaimed her as the greatest factor in her husband's career. And she, all the while, had been keeping house.

A BUSINESS WOMAN IN HER HOME

EDITH TENNEY

THE daughter of a highly successful manufacturer married a college professor. He was an able man and a famous scholar—but college teaching is one of the vocations that pay in other things than money.

The young wife was her father's daughter. Her household ran like clockwork. Her children were the envy of the town. Her neighbors looked to her for advice in every household problem. She took the lead in church and social work. She became president of the first woman's club in her state to own its own clubhouse.

But her father, and her uncles, and her brothers were all business men. Business was in her blood. Instead of taking up the latest fashionable amusement or looking about for something to reform, she studied her own home—and took out a patent for a new doll for sick children to play with in bed.

An unused room in her house became a little factory, where she kept two or three women at work. Her business correspondence soon demanded a stenographer and bookkeeper. She gave out work about the town to women in their own homes. A local factory expanded its business to provide her materials.

When people asked her why she, a professor's wife, went into a business venture, she said frankly that she wanted the money. But everybody knew

that, quite as much, it was because she loved work.

As her children have grown up and her home duties have become lighter, she has let her business expand—but never so as to interfere in any wise with her duties to family and home. She has been far happier than if she had squandered her leisure in amusement. Her profits have given her children advantages which they must otherwise have lost. She has added to the income of numerous other households. To several other women she has brought self-support. Sick children and their weary mothers all over this land are blessing her invention.

THE MOTHER

ROBERT LOUIS STEVENSON

It is not yours, O mother, to complain,
  Not, mother, yours to weep,
Though nevermore your son again
  Shall to your bosom creep,
  Though nevermore again you watch your baby sleep.

Though in the greener paths of earth,
  Mother and child, no more
We wander; and no more the birth
  Of me whom once you bore,
  Seems still the brave reward that once it seemed of yore;

THE MOTHER

In this picture of his own mother, the artist, James McNeil Whistler, has given the world a representation of the ideal mother with all her unselfishness, patient devotion, and self-sacrifice

Though as all passes, day and night,
  The seasons and the years,
From you, O mother, this delight,
  This also disappears—
  Some profit yet survives of all your pangs and tears.

The child, the seed, the grain of corn,
  The acorn on the hill,
Each for some separate end is born
  In season fit, and still
  Each must in strength arise to work the almighty will.

So from the hearth the children flee,
  By that almighty hand
Austerely led; so one by sea
  Goes forth, and one by land;
  Nor aught of all man's sons escapes from that command.

So from the sally each obeys
  The unseen almighty nod;
So till the ending all their ways
  Blindfolded, loath, have trod:
  Nor knew their task at all, but were the tools of God.

And as the fervent smith of yore
  Beat out the glowing blade,
Nor wielded in the front of war
  The weapons that he made,
  But in the tower at home still plied his ringing trade;

So like a sword the son shall roam
  On nobler missions sent;
And as the smith remained at home
  In peaceful turret pent,
  So sits the while at home the mother well content.

THE "GIRL PRESIDENT" OF WELLESLEY

ADAPTED

One of the wisest men now living in the United States said of Alice Freeman Palmer, "To my mind, this career is unmatched by that of any other American woman. Mrs. Palmer's life and labors are the best example thus far set before American womanhood." Another of her fellow countrymen said, toward the end of a long life of eminence and public service, "There is no other of our generation, with the possible exception of Phillips Brooks, who has stood to such a degree for those qualities in which we must all believe with unquenchable faith if we are to do anything in this world."

Yet she was little in the public eye—and that little rather against her will. She neither wrote books nor went about the country delivering lectures. Her tastes were all for her home. She avoided society, and gave herself to her housekeeping, to her friends, and to all persons whom she could help. She had no early advantages of birth or station. Half her years were spent in comparative poverty. By sheer personality and character she made herself perhaps the most widely loved woman of her time; so that when she died, in 1902, nearly two thousand persons wrote to her husband to express their personal loss.

Colesville, in central New York, where Alice Freeman was born in 1855, is not even a village—merely a group of farms, with the nearest considerable hamlet seven miles away. It is a fair and

Courtesy of George Herbert Palmer

ALICE FREEMAN PALMER

With an unswerving will to learn and an unconquerable determination to succeed, this woman won the presidency of a great college and recognition as one of the most brilliant women of her time

smiling land, with hills and fertile fields and woods, and the winding Susquehanna—a country to make a child love nature and become strong and sane.

Here the little girl grew up like any farmer's daughter. There was little money and much work to do. Almost as soon as Alice could walk she was assigned the duty of calling her father from the field, of helping her mother with the dishes and the beds, and of gathering eggs from the barn. By the time she was five she had three younger brothers and sisters to attend. As they grew older she dressed them, brushed their hair, took them to school, and performed all the offices of a little mother in a household of slender means. At an age when children of the well-to-do are hardly out of their nurses' arms, this little country girl was already well started in the cheerful doing of regular work, lightening the labor of those above her and taking responsibility for those below. Precisely this, it turned out, was to be her vocation in life.

Of early schooling she had little that was worth while, until at the age of ten she entered the academy in the nearest village.

Fortunately, this school, though small, was thoroughly good. The pupils were put through the solid old-fashioned subjects—Greek, Latin, mathematics—till they learned to work and to think. Better still, they came under the influence of an uncommonly gifted teacher who opened Miss Freeman's eyes to a new world. "Words do not tell," she said in later years, "what this old school and

place meant to me as a girl. Here we were taught truthfulness, to be upright and honorable; here we had our first hopes, our first ambitions, our first dreams, and some of us our first disappointments. We owe a large debt to Windsor Academy for the solid groundwork of education which it laid."

At seventeen, Miss Freeman was ready for college. Her family, however, opposed her going. Few boys, even, had ever gone to college from those parts; few girls at that time went from anywhere. The family means were scanty. At most, only one child could go to college, and that one ought to be the son, since he would have to support the family.

Alice Freeman, on the other hand, argued that since she was the eldest child she ought to have the first chance at training that would enable her to help the younger children. Anyhow, she meant to go if it took her till she was fifty. Long and grave were the family counsels; but in the end the daughter's judgment prevailed.

But what college? The splendid women's colleges of the present day had either not then been founded or were just getting a feeble start in the world. Only a few men's colleges had admitted women on any terms. The best of these was the University of Michigan, which had opened its doors to women only two years before. It was a thousand miles away —but it was the best. To Michigan, therefore, Miss Freeman went. For the rest of her life she believed boys and girls should be educated together.

Before she was twenty, needing money, she

Photograph from Nichols Studio

Crews of Wellesley College forming the "W" on Lake Waban

dropped out of college and became principal of the Ottawa High School. It was the first time she had ever taught; some of the pupils were her own age; all the teachers were older. "I begin at nine in the morning," she writes to one of her college mates, "and end at half-past four. Then I have my registers and class books to arrange, and so don't go home till supper time. After that I have eight lessons to prepare for the next day, which, when I am tired, costs some effort. I try to spend the entire evening on these. Friday nights I arrange the standing of each one and count the absences. Once a week we have essays, declamations, and readings; and Saturday afternoons I have essays to criticise. Then I board three quarters of a mile from the school, and that takes time. Saturday, I sew all the evening as hard as possible." With all this, Miss Freeman managed, by using her

vacations, to keep up with her college studies and graduate with her class.

Teaching was clearly her vocation, and to teaching she went, returning to the university for further study during her summers. At twenty-two, slight and in feeble health, she was principal of the high school at Saginaw, Michigan, where one of her first official acts was to expel a turbulent youth of her own age. When she was twenty-four she became professor of history at Wellesley College. At twenty-six she became president, with a salary of four thousand dollars a year. Truly she had made good her promise to her family when she asked them to give her first chance at a college course!

Her success was brilliant; she was soon one of the noted women of the country. Her means were ample. Her wide circle of friends included many of the most eminent men and women of America and Europe.

But her public career had been forced upon her—she would much have preferred a home of her own. She started the college on the seventh year of her presidency, carried it till the first day of the Christmas vacation, worked at her desk till midnight, and then closed that desk forever, being then only thirty-two. The next morning, at the house of the governor of Massachusetts, she was married to George Herbert Palmer.

Her husband was a professor at Harvard, a scholar of world-wide reputation. When they were first married, the wife, having always boarded, knew so little about housekeeping that her husband had to

instruct her. But she soon became almost as famous as a housewife as she had been as a college president, and was the neighborhood oracle for cooking recipes and the fitting of frocks.

Then followed not only the happiest but perhaps the most useful period of Mrs. Palmer's life. She had a beautiful home in one of the finest old houses in Cambridge. There at all hours of the day thronged all sorts of visitors—working girls and college students and famous men and women from two hemispheres, so that the family rarely sat down to a meal without a guest. They had, besides, a charming summer home in an out-of-the-way country village where nobody ever came. Every few years they traveled or kept house in Europe.

Few were the good causes or the interesting movements in which Mrs. Palmer did not have a part. She was trustee of Wellesley and of various other schools and colleges. She raised one hundred and ten thousand dollars for Wellesley College, and another hundred thousand for Radcliffe. She organized the women's department of the University of Chicago, and the chime of bells in its tower, given in her memory, daily voices her praise. She was one of the founders and also the president of the national association of women college graduates. She helped to start a women's college in Spain. She originated a league for the protection of poor immigrants from Italy. Her lesser affairs are beyond counting.

For thirteen years the successive governors of

Massachusetts appointed her to membership in the State Board of Education, until by length of service she became the senior member and the most influential. Manual training in the schools, domestic science teaching, the improvement of the country schools to the level of the city schools, are in large measure her work. In addition, she was one of a small committee who managed entirely the state exhibit for the Columbian Exposition at Chicago.

Yet all these varied and important tasks were done without pay, as other women serve church or club—incidents to her housekeeping.

This is probably the most brilliant career of any woman of this generation. Yet how uneventful it was! She got her education. She earned her living. She married. She created a home. What time and strength she could spare from her household, she gave to worthy labor outside. Half the girls who read this account will have no other life story.

THE PROFESSIONS

THE RETURN OF RHODA

SUSAN GLASPELL

"Seems a little lonely at times, mother."

"Now, pa, you know it 's all for the best."

"I 'm not arguing that it is n't all for the best. I was saying it was a little lonely—that 's all."

Mrs. Free pulled the big wooden rocker nearer the stove, which was sending a warm glow through the old-fashioned sitting room, and took up the soft white wool which she was to transform into "one of those shoulder things" for Rhoda—Rhoda would need such things now she was in the city.

But instead of beginning her work she turned a little in her chair and looked out at the broad expanse of white. The hills were all cold and shining, and more snow was even now flying in the air. Winter had come in earnest.

"Of course, mother," said the old farmer, with a quiet, kindly sort of humor in his voice, "*you* are never lonesome."

"When I do get lonesome, pa," she said, picking up her work, "I just keep thinking how it 's all for the best—and that 's consoling."

John Free walked over to the window. "If Rhoda was home now, and was teaching the school, I 'd just about be putting Nellie to the cutter. Rhoda never did much walking over bad roads when I was around."

"And Rhoda appreciated it, pa," said Mrs. Free, after a pause, in which she had been silently counting stitches.

"Rhoda was the best teacher they ever had around here." And then, as his wife was still counting stitches, he continued, half aggressively, "Everybody says that."

"Fourteen—fifteen—sixteen. You never heard me say, pa, Rhoda was n't a good teacher. All I said was, a girl who could sing like Rhoda had no business teaching the Hickory Grove school—or any other, for that matter."

"Brother Williams says there is n't the same inspiration in his preaching now that Rhoda's left the choir; and I will say," his voice sank to the tone of one making a confession, "that while I go to church to worship the Lord, the worshiping was a little—well, a little more pleasant, I might say, when Rhoda was there."

"More than one has said that," remarked Mrs. Free complacently.

"I never saw anything to beat the way this whole community leaned on Rhoda! 'Twas Rhoda this—and Rhoda that; nothing from a barn raising to a funeral could go on without her. They can't ever say our Rhoda was stingy with her singing, mother."

"I guess our Rhoda would n't have been her pa's daughter if she was stingy with anything," said Mrs. Free quietly.

She had a way of saying those things when least

expected, and they never failed to be disconcerting. "Now I was n't counting on that having anything to do with it," he said, awkwardly.

"Mother," he went on, after listening patiently to "thirteen—fourteen—fifteen—sixteen," "shall you ever forget how she sang 'Lead, Kindly Light' at Tim Powers' funeral? Seems like of all the times I ever heard her, that was the most moving."

The soft wool fell to Mrs. Free's lap. "Rhoda's so sympathetic," she said softly.

John Free chuckled. "'Pears to me she would n't be her mother's daughter if she was n't *some* sympathetic."

"Fourteen—fifteen—sixteen—turn," was the only response.

"S'pose I might as well be about the chores. Does seem like this winter was going to be mighty long."

"Now, pa, don't be so restless—fourteen—fifteen—sixteen—there!—that's wrong."

He stood by the window, putting on his heavy coat. "Looks like Fred Barrett's cutter coming," he remarked.

"If Rhoda was home it would n't be hard to guess where he was making for," remarked Mrs. Free.

"Coming along pretty brisk. Cold out, I reckon. He's got some one in with him—and 'tisn't a man. Mother," he cried, excitedly, after a moment, "Fred Barrett's opening the gate! Mother," he added in a choked voice, "come here!"

She stood beside him at the window, and he

pointed down to the gate. "What do you think?" he gasped.

The woman's face grew strangely white. "It's—it's—it can't be—'tis—"

"Rhoda!"

They stood there in a daze, and then two pairs of hands were fumbling at the knob.

How Rhoda got out of the sleigh, who carried in the valise, how Fred Barrett got away without being so much as asked in, they never quite knew. It was all a strange whirl, and then the door was shut, the sleighbells died away, and Rhoda, after one strange, frightened look around the old room, threw herself into her mother's arms—hat, snowy coat, and all; and there burst from her the wild, uncontrollable sobs which follow a long, bitter strain.

The mother stood holding her in utter silence—she was a mother, and knew what was best. But when John Free could bear it no longer, he put a hand on the girl's shoulder, and said, brokenly, his own rugged face wet with tears, "Rhoda, girl, you're home now. No matter what's happened, it's all right now."

She raised her head then and groped for her father's hands. "It was a mistake," she moaned, piteously, "a mistake."

"Now, what's a mistake?" said John Free. "I just want to know."

"Mother," cried the girl, her voice still thick with sobs, "it's gone! Our dream's gone, mother! I—I—oh, I—can't—*sing!*" She sank to a chair,

her head fell to the table, and sobs such as the old room had never heard before crowded upon one another in hot, passionate succession.

"Something's happened to your voice, Rhoda?" asked the old farmer, timidly.

She grew more quiet then. "Oh, no, pa," she said, "nothing's happened to it. It never was there. I never could sing."

"Well, I guess we know better than that!—And whoever said—"

"Now, pa," broke in Mrs. Free, "this is no time for arguing. Come right up to the fire, Dodie, and we'll get off those wet things and get a good, hot drink. You'll take your death o' cold—sitting there as though no one cared whether you were wet or dry!"

After her feet were warm, and she had sipped the tea her mother had made for her, and the old surroundings had taken a little of the sting from her wound, the girl began casting about in her mind for words which would not distress her parents. They were sitting on each side of her, eager to know and yet reluctant to ask questions which would bring pain—their sorrow, after all, tempered with gladness because she was at home.

"You see, pa," she began quietly, "there are no really great singers around here. I am the best there is, and so, because I can sing a little, Miss Parsons—all of us—made a mistake and thought I had a great voice, when I have n't."

"But I don't see," began the old farmer.

"Now, pa," protested his wife, "just let Rhoda tell it."

"The city is full of good singers, mother. They come from all over the country. There are thousands of them who can sing better than I can."

"Now I don't believe that!" cried her father, slapping his knee hard.

The girl smiled at him fondly. "You'll have to believe it, pa, for my teacher, one of the best in the whole city, said so."

"He did, did he? Well, what had you done to make him mad? There's something behind it!"

"Oh, no, pa. And you must n't resent it. It was very kind of him. He might have gone on taking our money for a long time, but he did n't, you see."

"Hum!" grunted John Free, dubiously.

"And he was so very kind about it. It was after my lesson, and I was standing there, putting on my gloves, when he looked over at me in a strange kind of way and asked me just what I hoped to make of my voice. I did n't quite know what to say, and then he asked me point-blank if I expected to make money out of it, to make back the money I was putting into it. I told him I did, and then—then he asked me something about our circumstances here at home—oh, very kindly, pa," as an angry exclamation burst from the old farmer—"and when I told him we were n't rich, that—that it had been an effort, you know, he looked at me very queerly, and then he sat down and told me the truth." She hesitated, and then went on with

a little catch in her voice. "And in spite of all I've suffered, I thank him from the bottom of my heart."

Her mother reached over and took one of her hands. "Just what did he say, Dodie?"

"Merely that it was n't great, mother; that it was n't worth the money we would have to put into it. He says voices can be made without much to start on, but it takes a long time and a great expenditure, and when there are so many who have—have something good to begin with, why, my voice would bring us nothing but—disappointment. And I see that he is right.

"He says it's a nice little home voice," she went on, trying to smile, "but that is all it ever will be, you know, and I can't afford to pay five dollars a lesson for—don't you see, mother?"

Mrs. Free only pressed her child's hand tighter, fighting the lump which kept rising in her own throat.

"I was n't very philosophical about it at first," continued the girl, her voice shaking as if it might give way with any word. "Of course I did n't cry or make any fuss before him. I could see that it was kind of him, and I told him so, and that I would n't take any more lessons. Oh—he was so good about it! He told me that we could n't all have great voices in this world; that it was n't our fault if we did n't have them, and that if we did the best we could with what we had, there was nothing to be ashamed of. He shook

hands with me, and said he had liked me so much, and that it was just because he liked me he had told me.

"I knew that what he said was true—about our only being expected to do our best with what we had, and yet—O mother!—mother!—you know how foolish I've been! You know how I've stood up in our little church, and dreamed it was a great city church with thousands of people—you know how I've gone to sleep at night dreaming I was taking great armfuls of flowers, while people clapped and clapped to hear me sing again! Mother, *you* know!" and she pressed the worn hand she held close to her cheek, while the hot tears ran down her tired, white face.

"When was all this?" demanded her father, his voice gruff with the effort to keep back the tears.

Rhoda hesitated. "Ten days ago," she said at last.

"And where under the sun have you been ever since?"

She pushed back her hair wearily. "I've been trying to work in a store—and I was almost as dismal a failure at that as I was as a prima donna."

"Now, Rhoda,—how *could* you?" cried her mother.

"Oh, you don't know the feeling I had! I wanted to come home, and yet I just could n't. It seemed like coming home defeated. It seemed I just must do something in the city, so one of the girls got me a place in a store."

She paused, and then laughed—the nearest to a natural laugh they had heard since her return. "I was an awful clerk! I hated it! The air was so bad, and some of the people were so snippy and horrid. And then, father, one night I came home with my head and feet both aching, and all tired and sick, and I found your letter about Mr. Childs wishing I was home to take the school, and about you and mother being so lonesome, and—and that letter brought me home."

John Free cleared his throat and looked over at his wife with an air which defied contradiction or rebuke.

"It's a curious thing," he said, "that I was telling your mother this very afternoon that I had nine tenths a notion to go and telegraph Rhoda to come home. I—I'm not feeling any too well this winter."

"Are n't you, pa?" she asked, in quick concern. "What seems—"

"Oh, I'll be all right now," he hastened to say, and looked boldly over at his wife.

He went out to see about the chores then, and the girl sat and talked her heart out to her mother. When it came time to get supper she went about some of her old duties naturally, almost gayly, and she more than once brought joy to her mother's heart by letting her laugh ring gladly out through the old kitchen.

"Mother," she called from the window, where she was standing beating an egg, "where under

the sun is father going this time of night? He's got Nellie hitched up, and he's going off."

"Now I do say!" cried Mrs. Free, and hurried to the door to enter protest, but only in time to see her husband wave his hand in provoking fashion and drive away.

"Well, if that is n't funny!" laughed the girl, and went on beating her egg.

When he came back, about half an hour later, he sat by the fire and watched Rhoda set the table. "Joe Childs was mighty tickled," he chuckled, at last.

She put down the sugarbowl with a thump. "Now, father, where have you been?"

"Hum! Guess I've got a right to go about my own business. I had an errand up to Joe Childs's, and while there—while there," he repeated, eying her defiantly, "I happened to mention that you were home—and, say, he jumped right out of his chair, and waved his arms and shouted at me, 'Look here, John Free, will Rhoda teach our school?' and I replied that you might consider it."

"Now—father!"

She laid the knives and forks around, and then stood there, looking at him with eyes a little misty. "But it *is* nice to feel you're back where some one wants you, where—where you're a success," she added tremulously.

"Never was a teacher around here like you," said John Free.

—From *The Youth's Companion*

PREPARING TO BE A TEACHER

KARL W. GEHRKENS

The girl who is trying to make up her mind whether or not she shall teach school should remember these things:

First, the choice of a vocation is too important a matter for her to decide hastily. In justice to herself and every one else, she should make sure that she is beginning work that will suit her, and is within her capabilities.

Second, although teaching is the traditional occupation for women, and although one hundred thousand new teachers—more than three quarters of whom are women—are needed every year, there are other less widely known occupations that are sometimes more attractive. The average salaries in teaching are undoubtedly lower than in many other professions, although the teacher whose preparation is thorough, who has chosen an uncrowded specialty, and whose personal qualities are of the right kind, generally has little complaint to make about payment, if she considers also the intangible rewards of her profession.

Notwithstanding the attractiveness of many of the vocations more recently opened to women, teaching is a profession that always will attract—and rightly so—vast numbers of women. A large part of the overcrowding and a still larger part of the failures in the profession are due to insufficient or

Janet M. Cummings

The teacher in the country school, above all, must be friend and guide and counselor to her little charges

unintelligent preparation, or to ignorance of the advantages and disadvantages of specific branches of teaching.

The girl who expects to teach school must remember that the profession of teaching is too responsible to be entered thoughtlessly or lightly. The ideal that the child carries with him throughout life is usually the ideal that he has acquired while in school. Since he looks up to the teacher as the most important person in the school, many of his habits will be formed in direct imitation of her conduct, and many of his ideals will be based on what she thinks and says. These ideals will remain with him long

after he has forgotten his arithmetic and geography. Character is undoubtedly the first essential to success in teaching.

The second essential is good scholarship. The prospective teacher must do her own school work well, and have under good control the knowledge that she is to impart. Children admire skill of all kinds—mental as well as physical; they respect the teacher who knows her subject so thoroughly that she does not need to keep her textbook constantly in hand. This does not mean that the teacher must be able to remember everything that she has ever learned; she must have done her own academic work so well that she can easily make her knowledge available by brief review. Remember that it is the poorly prepared teacher whose work is full of care and worry.

Some of the best students, however, often turn out to be very poor teachers. Besides knowing her teaching material well, the teacher must like children, and be genuinely interested in their activities. It is significant that as a rule teachers who have small brothers and sisters make the best primary teachers; they have learned unconsciously to understand the point of view of the child. The girl who is bored by having children around, who thinks their games are silly, and who is not willing to show her small brother how to manipulate a new toy, had better either change her attitude or follow some other occupation than teaching.

The most successful teacher is the one who comes closest to her pupils. The successful teacher is also patient. Children's minds do not work as

A school where teachers are trained. Among scenes like this the prospective teacher does her academic work, gaining the knowledge she is to impart to the children

rapidly as grown people's. No girl can become a successful teacher if she is impatient—with children or anybody else!

Another essential is good health. No girl who is not strong should consider going into the work of teaching. Teaching is hard work physically, and wearing work mentally. The teacher's hours are long. The popular belief that the teacher's day is

a short one—only six hours for five days a week—is false. In order to make a real success of her work, the teacher must spend a good deal of time each day in planning and preparing lessons, correcting papers, helping individual pupils, or caring for the interests of the school in the community. The teacher who expects to go very far in her profession must spend many of the long summer vacations at summer schools. She can generally carry on this necessary study, however, under pleasant conditions.

The successful teacher is personally attractive. She has a pleasing personal appearance—a very different thing from beauty—the ability to select becoming clothes and to wear them in a tasteful manner, a low-pitched and well-modulated speaking voice—either natural or acquired—and tact in dealing with her associates.

If a teacher has these qualities, and in addition plenty of common sense and a devotion to her work, she will succeed. In considering teaching as a vocation, the girl should remember what insurance men call the "cumulative dividends" paid on a life investment. The teacher who devotes her life to the work and labors in the right spirit will, as the years pass by, win the love and gratitude of her former pupils. How valuable is this reward, only those can tell who have won it; only those who with Agassiz desire this one word as their epitaph—"Teacher."

—From *The Youth's Companion*

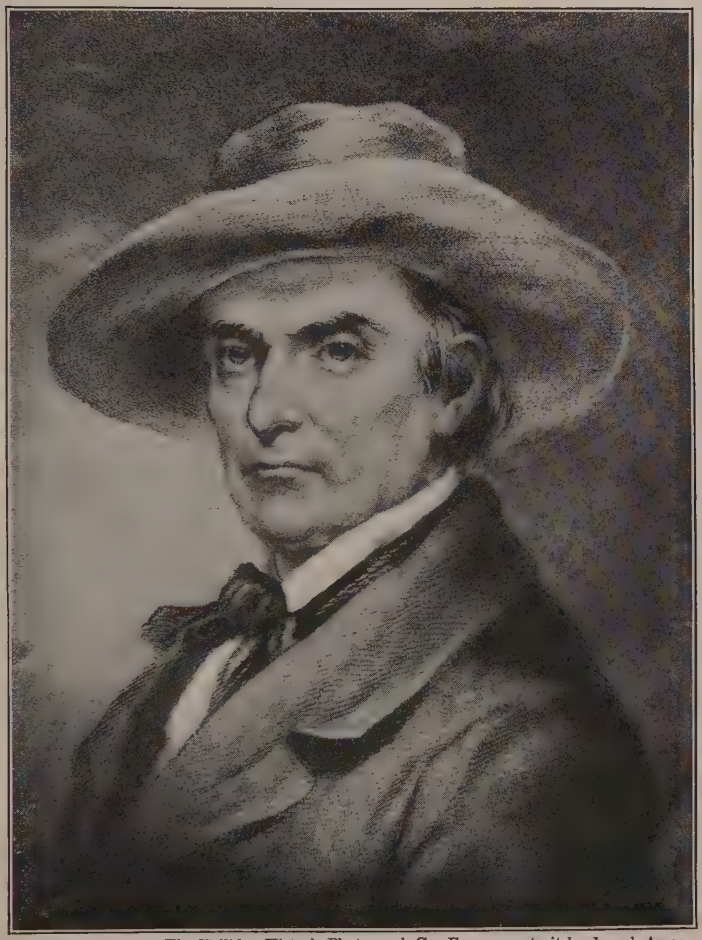
THE COUNTRY LAWYER IN NATIONAL AFFAIRS

GROVER CLEVELAND

"God made the country and man made the town." These words, written more than a century ago, give voice to a sentiment which has been deep-rooted in the minds of men ever since the first city was built. The belief has been very generally accepted that nearness to nature exerts a benign influence upon heart and character. The incidents of country life not only stimulate the delicate and lovable features of human character but promote and foster mental vigor, wholesome self-reliance, sturdy pertinacity, unflinching courage, and faith in honest endeavor.

The relationship of rural conditions which produce these qualities to success in the rugged and stern realities of life is indicated by the fact that a large proportion of all those who in town and city have won professional honors or wealth have been of country birth and breeding.

I believe legal study and practice in the country are calculated to sharpen all these qualities, and that this is their usual effect. I know that the struggle for a livelihood from the practice of law in the country, and the almost endless number of practical things which the country lawyer must learn, in contests involving every social and business question, prepare him, as no other conditions can, to deal intelligently and usefully with the various and widely separated questions met in public service.



The Halliday Historic Photograph Co. From a portrait by Joseph Ames

DANIEL WEBSTER

A country lawyer. In the midst of his fame, his thoughts constantly turned with joy and enthusiasm to farm and field and stream

He has an advantage in this regard over members of the profession in large cities, because legal work is there largely specialized; and because of less distracting surroundings he is apt to be more thoughtfully and more patriotically interested in political matters.

I am also of the opinion that the study of ways and means, which the moderate income of the country lawyer makes necessary, and a familiarity with the simple, inexpensive manner of living prevalent in rural communities, tend to foster ideas of frugality and economy which, although frequently left at home when public instead of private expenditures are under consideration, ought to be insisted upon as indispensable to a satisfactory discharge of official duty.

It may not be amiss to intimate also in this connection that the close personal intimacy and neighborliness of rural life and a consequent sensitiveness to the interests of those with whom they dwell, more easily persuade lawyers in the country that they should be willing on patriotic grounds to devote time and effort to official work.

Undoubtedly there has been a multitude of country lawyers endowed with latent power, "the applause of listening senates to command," of whom, because opportunity failed them, it may be said:

> Along the cool, sequestered vale of life,
> They kept the noiseless tenor of their way.

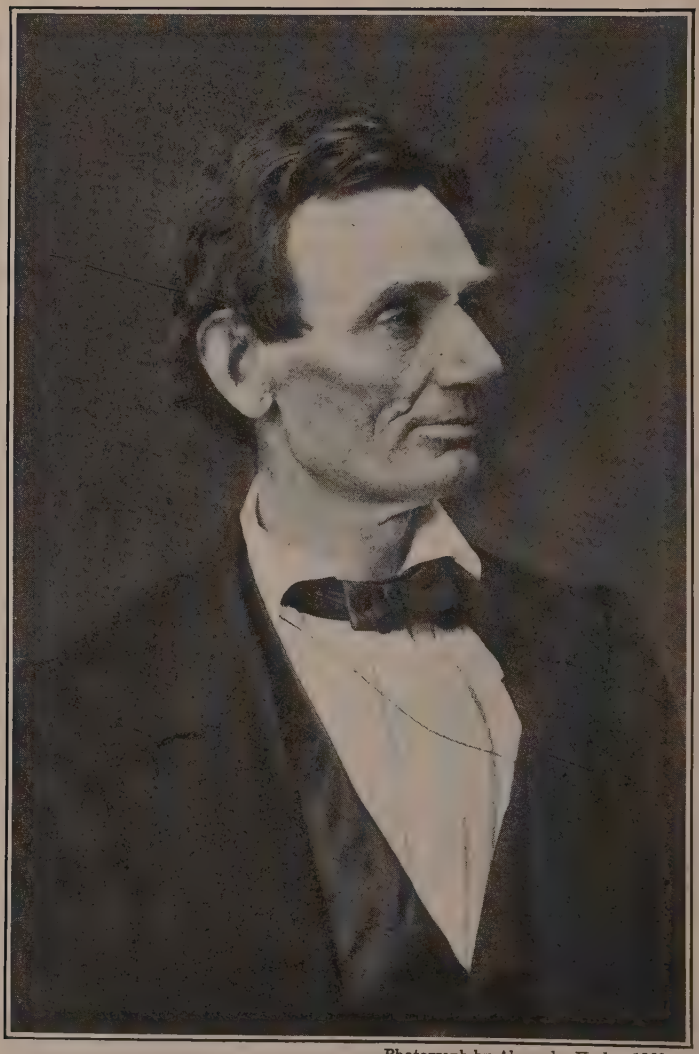
Nevertheless, opportunity has come to thousands of them, and I believe that, as a general proposition, it

Photograph by the Halliday Historic Photograph Co.

Birthplace of Daniel Webster at Franklin, N. H. A large proportion of those who have won success and honor were born and raised in the country

can safely be affirmed that country lawyers are more in the way of opportunity than city members of the fraternity.

Daniel Webster was a country lawyer. He had reached the age of thirty-four years when he left rural surroundings in the state of New Hampshire to enter the broader field of legal practice in the city of Boston. Before that time he had laid broad



Photograph by Alexander Hesler, 1860.

ABRAHAM LINCOLN

A man who loved the country and whose nobility of character was developed by rural surroundings

and deep the foundations of professional fame, and had displayed on the floor of Congress the powers which afterward moved a nation to wonder and admiration.

He was a devotee of country life, and brought to the public service such inspiration as God gives to those who love His works. This inspiration made him the expounder of the Constitution, and the most powerful and invincible defender of our national life and unity.

And yet this leader on the highest plane of human endeavor has left in unpublished letters, written by him in the height of his fame and public labors, ample proof that in the midst of it all his thoughts constantly turned with joy and unabated enthusiasm to farm and field and stream. His genius for supreme national service won for him a solitary place in American statesmanship, and he lived in the atmosphere of his countrymen's idolatry; but when it came his time to die, he sought with child-like yearning the quiet and peace of Marshfield.

Lincoln, too, was a country lawyer; and he was called to save a nation. He never lost the impress of an early life closely surrounded with all the incidents of rural existence, and encompassed by the stern providences of God. He, too, loved the country; and He who made the country gave him, in compensation, an unstinted measure of inspiration for the most impressive and solemn public duty.

The deeds of these two country lawyers need no especial recital. They are written in the annals of

a grateful nation, and challenge the admiration of mankind. And who shall say that the majestic forms of Webster and Lincoln, standing forth in the bright light of human achievement, do not teach the world how the nobility of American character is developed by American rural life?

—From *The Youth's Companion*

HOW I BECAME A DISTRICT NURSE

LILIAN DODGE

Even as a girl, I knew that if I ever took up nursing I should succeed. My family never really enthused over my cooking. Some of my seams had to be ripped out and done over. I can't recall that I was ever asked to sing more than once at the same place; but I noticed that when any one was sick he was glad to have me around.

Nor did it take me long to discover that I had the other natural qualities. I knew that I should be strong enough, because I could sweep and dust and cook, and be on my feet day after day, and yet be up every morning ready for the next duty. I knew that I should be able to carry in my head the great mass of exact information which every nurse must have at her finger's end, because I always managed to stand close to the top of my school classes. I knew that I should stand the loneliness of confinement to a sickroom among strangers, because I never cared much for parties, anyway. Most of all, I knew that I should like my work because I liked to be with old people and was fond of children.

In fact, I feel very sure that the reason why almost every girl who fits herself for our profession succeeds in it, is that she can always give herself so thorough a trying-out beforehand. She who does not like to cook her father's breakfast will not like to take charge of an invalid's diet. The care of hospital instruments and supplies, the sterilizing of an operating room, are only a step beyond caring for table dishes and linen and scrubbing the kitchen floor. Who does not succeed with one will fail with the other. The girl who cannot keep straight the *l's* in *parallel* will never master the "dosage" of a thousand various drugs. Medicine, being one of the learned professions, is closed to persons who cannot learn. It does not take long tending of a helpless baby brother or sister to tell any girl how she is going to like the care of a still more helpless adult.

Another thing about nursing appealed strongly to me. I could hope for only slender schooling, and a hospital training school is one of the few places where one is given a sound vocational training, and is paid for accepting the gift. Two years in the high school were all that my people could afford to give me. After that, I must find some work to fill in the six years until I should be twenty-two and old enough to be admitted into a training school.

With all the planning and advice I could get, the best outlook seemed to be to go to setting type in a printing office. At least I should learn to spell and

to punctuate, and thus fill one gap in my education. Typesetting is piece work—I could toil as long and hard as I pleased, but when work was slack, I could use the time for myself and not stand round waiting, like a clerk in a store.

All fell out as I planned. I was sure of six or eight dollars a week, and twice as much during rush times. When there was nothing to do I studied for myself, general school subjects and those which I should want later in my profession, and thus, during these six years, I was able to make up what I lacked of the high-school course which all hospitals demand.

We used to print examination papers for a near-by college, and since I had had just a little more schooling than any of the other girls, this work fell to me. In this way I kept up and improved my scholarship while at the same time I received extra pay for my time and was often kept at work when my companions were laid off. We also printed at the office a weekly newspaper, and when items came in badly written I used to improve their form as I put them in type. In such various ways I was able, as the saying is, to "make one hand wash the other."

My hospital experience was about like that of other would-be nurses. I scrubbed paint and made beds, and cooked meals in the trig little diet kitchens. When I should have been in bed, I shut myself up in a closet with a candle and a book to cram for examination. I have come downstairs in the night to find a patient at the medicine closet just on the point of drinking from a two-quart bottle of carbolic acid.

Courtesy of Infant Welfare Association, Chicago

Lessons in practical hygiene by the district nurse bring benefits not only to the individual but indirectly to the entire community

I have reported for duty in the morning only to be told that the hospital bakers had struck, and that until further notice I should be responsible for the supply of bread. I have run the steam boiler, when a blizzard arrived suddenly in the night and I was on duty and the fireman was not. It 's good training, this hospital life. By the time one gets through, there is n't much that she is n't ready for.

I was always especially interested in the talks which the graduates of the hospital used to give to the students about the work which awaited us outside. Some of these nurses were in private practice,

where they alternated between working themselves half to death over one case and resting while they waited for another. Some were office nurses, or school and factory nurses, with fixed hours and lives as regular as the town clock; while some were medical missionaries, at posts in India, China, Labrador, or Alaska; and others were connected with the army or the Red Cross Society. Some were heads of important city hospitals, with scores of persons under them.

Of them all, however, the district nurses seemed to me to have the most interesting work. They can live among civilized people and have some sort of regular hours, while at the same time they are in for plenty of interesting adventures.

Courtesy of Infant Welfare Association, Chicago
Incidentally the district nurse teaches cooking and housework

So, in due time, a district nurse I became—oddly enough, in the same city where I had before been setting type. My regular duty was to go about among the sick poor, and minister to their needs. I had to teach the members of a family how to care for the

invalid among them; and wherever there was a new baby I tended it for a few weeks while I gradually trained the mother to look out for it herself. Incidentally, I taught cooking, housework, the care of the older children, and helped the bread-winners of the family to find work. In addition, I responded to sudden calls from well-to-do families until a regular nurse could be had.

There has been no lack of variety in my work. I have made my rounds and done my day's work, and then helped to fight for a typhoid patient's life three nights running. Yes, and we won! But I slept from Saturday night round to Monday morning after it. I have struggled for weeks, commonly in vain, to put some sort of decent human energy into a family of ne'er-do-weels who were too shiftless to put screens in their windows in fly time or to care whether the baby's milk was sweet or sour; and I have comforted self-respecting poor in their great sorrows.

I remember how once, during a delightful hour making comfortable a shrewd old Scotsman who talked most entertainingly the while, a half-dressed small boy burst through the door, crying, "Miss Nurse, Miss Nurse! Sammy Wiggins has drowned himself in the swimming hole next the icehouse, and the other boys are diving for him!"

The nearest vehicle was a milk wagon, which I impressed, driver and all, in the public service "to save life."

Down the street we tore, and out along the country

road, horse on the gallop and milk cans rattling behind us. Little Sammy Wiggins had n't many minutes' leeway when I broke through the ring of frightened boys and found him limp on the grass. But we pumped the breath of life back into him, and in a week he was on his legs again. Now, when I meet him on his way to school, he grins sheepishly.

It is a good life. I meet on equal terms some of the best citizens in the community—clergymen, physicians, the philanthropic men and women who support my work. I know all sorts of queer and interesting people among the lowly. My uniform is passport to any troubled home.

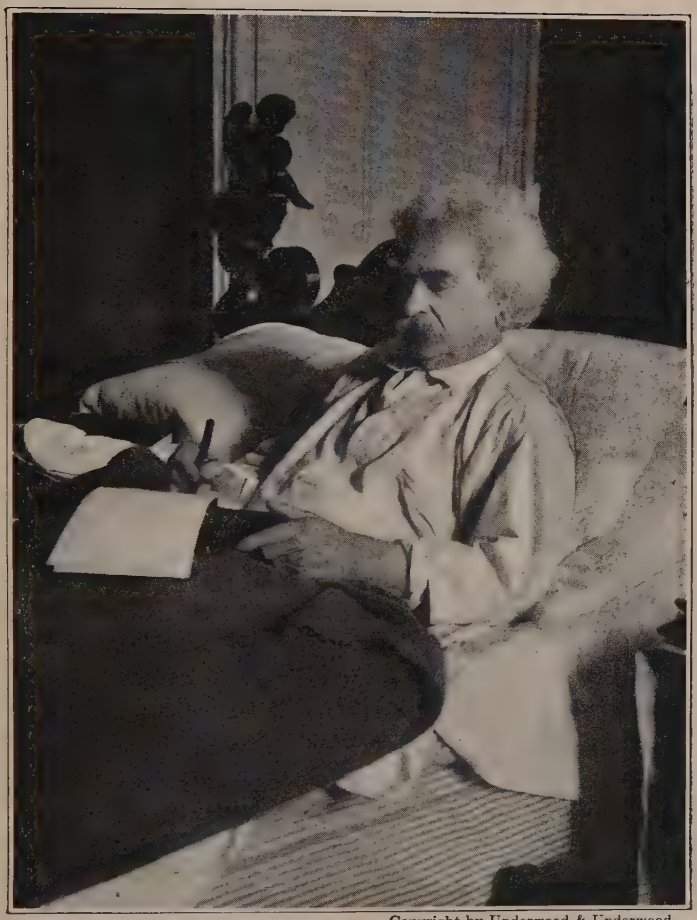
To be sure, there are summer days when the hot brick pavements seem very, very long; and there are winter days when only the postman and I are abroad. But, summer or winter, I am greeted by sturdy boys whom I knew as sickly babies, by bewildered young wives whom I am teaching to keep house, by working men whom I have patched up and made able to earn again, by the kindly old to whom I have brought comfort. Doctor, clergyman, newspaper man, and district nurse—these are they who get closest to life.

—From *The Youth's Companion*

WHERE MARK TWAIN GOT HIS STORIES

EDWIN T. BREWSTER

Mark Twain's real name was Samuel L. Clemens. He was born in Missouri, and brought up in the little town of Hannibal on the west bank of the Mississippi.



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MARK TWAIN

In his later years the great humorist's favorite attitude when writing or dictating was propped against his pillows in a roomy, comfortable bed

But we shall best hear about his "call" in his own words.

"When I was a boy, there was but one permanent ambition among my comrades in our village. That was to be a steamboat man. We had transient ambitions of other sorts, but they were only transient. When a circus came and went, it left us all burning to become clowns; the first negro minstrel show that ever came to our section left us all suffering to try that kind of life; now and then we had a hope that, if we lived and were good, God would permit us to become pirates. These ambitions faded out, each in its turn, but the ambition to be a steamboat man always remained.

"I first wanted to be a cabin boy, so that I could come out with a white apron on and shake a tablecloth over the side, where all my old comrades could see me; later I thought I would rather be the deck hand who stood on the end of the stage plank with the coil of rope in his hand. But these were only day-dreams—they were too heavenly.

"By and by one of our boys went away. He was not heard of for a long time. At last he turned up as apprentice engineer or 'striker' on a steamboat. He was exalted to this eminence, and I left in obscurity and misery.

"There was nothing generous about this fellow in his greatness. He would always manage to have a rusty bolt to scrub while his boat tarried at our town, and he would sit on the inside of the guard and scrub it, where we could all see him and envy

him and loathe him. And whenever his boat was laid up, he would come home and swell round the town in his blackest and greasiest clothes, so that nobody could help remembering that he was a steamboat man; and he used all sorts of steamboat technicalities in his talk, as if he were so used to them that he forgot that common people could not understand them. He would speak of the 'lab-board' side of a horse in an easy, natural way that would make one wish he was dead; and he was always talking about 'St. Looy' like an old citizen.

"This fellow had money, too. Also an ignorant silver watch and a brass watchchain. He wore a leather belt and used no suspenders. If ever a youth was heartily admired and hated by his comrades, this one was. When his boat blew up at last, it diffused a tranquil contentment among us such as we had not known for months.

"But when he came home the next week, alive, renowned, and appeared in church all battered up and bandaged, a shining hero, stared at and wondered over by everybody, it seemed to us that the partiality of Providence for an undeserving reptile had reached a point where it was open to criticism.

"This creature's career could produce but one result, and it speedily followed. Boy after boy managed to get on the river. The minister's son became an engineer. The doctor's and the postmaster's sons became 'mud clerks'; four sons of the chief merchant and two sons of the county judge became pilots. Pilot was the grandest

position of all. The pilot, even in those days of trivial wages, had a princely salary—and no board to pay. Two months of his wages would pay a preacher's salary for a year. Now some of us were left disconsolate. We could not get on the river—at least, our parents would not let us."

When he was twenty-one, Clemens also took to the river. He paid an older pilot five hundred dollars to teach him, and in eighteen months he knew every snag and bank and dead tree and reef between St. Louis and New Orleans, every current and cut-off and depth of water, till he could find his way anywhere in the blackest night. At twenty-three, when most boys are finishing college, he was one of the best pilots on the river and was receiving the same salary as the Vice-President of the United States.

Then came the Civil War and closed the river. Clemens himself piloted the last boat through—and found himself without a job.

He tried soldiering. Then he went to California, where he looked for gold, and did not find it. Then he tried his hand at all sorts of occupations. Among other things he "screened tailings" with a long shovel, at ten dollars a week.

Samuel Clemens' second "call" came when he was twenty-seven. As a boy, he had played about the little village printing office which his older brother owned, and had gradually picked up the printing trade. His brother, in addition, printed a small paper. Sam used to gather news for this, and sometimes he had even tried writing articles. All through

Photograph by Eugene J. Hall

To act as pilot on a boat like this was the goal of Mark Twain's youthful ambition

his steamboat days, also, he had kept up his writing practice whenever he had a little time, and he had besides been studying as he could.

On the strength of this early experience, and of some letters to the California and Nevada papers which he wrote from the mines, Clemens at last got an offer to report for the *Virginia City Enterprise*. "Necessity," he said, "is the mother of taking chances." He footed it in from the wilderness, and appeared at the newspaper office in a blue flannel shirt, a roll of blankets on his back, trousers stuffed into his boot tops, beard down to his waist, and the inevitable navy revolver at his belt.

Slowly, with many ups and downs, Clemens made his way at newspaper work. In fact, he did so well, discovered so much news and told it so fearlessly, that various prominent rascals found him very much in the way.

As a result of this, during the winter he was thirty, he found it prudent to disappear for a time, and went off into the mountains with one old Californian, "pocket-mining." He found no gold; but he did find much more — *The Jumping Frog of Calaveras County.*

An old river pilot named Ben Coon told it to him—a slow-witted, sleepy old person who droned out pointless tales by the hour. Clemens, with his reporter's "nose for news," wrote out the yarn and sent it in to his paper.

The Californians thought it was the funniest thing they had ever heard. The New York papers copied the story. The Easterners thought it the funniest story they had ever heard. From a newspaper reporter, Clemens had become a story writer.

This was his third "call" — to his real life work. By the time he reached middle life he found himself the most widely known and the most read of all American men of letters. For a pen name he took "Mark Twain," the Mississippi steamboat man's word for two fathoms of water on the sounding line, and as "Mark Twain" he has already been read by two generations.

He made his stories out of his own life. His boyhood in the little Missouri town went into

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The great humorist standing in the private roadway at his summer home, Tuxedo Park, N.Y.

Tom Sawyer and *Huckleberry Finn.* "Tom" is really Sam himself. "Sid" is his brother Henry, and "Aunt Polly" is his mother. "Huck Finn's" real name was Blankenship. "Becky Thatcher's" parents named her Laura Hawkins. There really was a "Nigger Jim." In short, things actually did

happen very much as they are told in two of the best boy's stories that were ever written. There was even a real "Indian Jo."

The incidents of the river life went to make *Life on the Mississippi.* The California experiences appear in *Roughing It.* The first trip to Europe made *The Innocents Abroad.*

All the time that Clemens was trying his hand at typesetting, piloting, mining, reporting, and shoveling dirt, he was studying people and finding something to write about. As he himself said: "In that sharp schooling I got personally and familiarly acquainted with all the different types of human nature that are to be found in history, biography, or fiction. When I find a well-drawn character, I generally take a warm personal interest in him—I have known him before."

Twenty-four volumes it took for Mark Twain to sum up the experiences of his life. Whoso has not read most of these had better begin forthwith!

CONCLUSION

THE FLAG MAKERS

FRANKLIN K. LANE

This morning, as I passed into the Land Office, the flag dropped me a most cordial salutation, and from its rippling folds I heard it say: "Good morning, Mr. Flagmaker."

"I beg your pardon, Old Glory," I said, "you are mistaken. I am not the President of the United States, nor the Vice-President, nor a member of Congress, nor even a general in the army. I am only a government clerk."

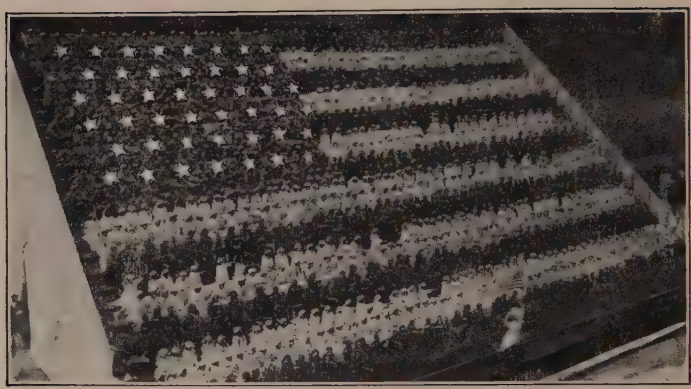
"I greet you again, Mr. Flagmaker," replied the gay voice. "I know you well. You are the man who worked in the swelter of yesterday straightening out the tangle of that farmer's homestead in Idaho."

"No, I am not," I was forced to confess.

"Well, then, perhaps you are the one who discovered the mistake in that Indian contract in Oklahoma?"

"No, wrong again," I said.

"Well, you helped to clear that patent for the hopeful inventor in New York, or pushed the opening of that new ditch in Colorado, or made that mine in Illinois more safe, or brought relief to the old soldier in Wyoming. No matter, whichever one of these beneficent individuals you may happen to be, I give you greeting, Mr. Flagmaker."



Courtesy of Boston Herald

This living flag, formed on the Common by school children of Boston, aptly illustrates the thought that on the acts and aspirations of each and every American depends the unsullied brightness of the flag

I was about to pass on, feeling that I was being mocked, when the flag stopped me with these words:

"You know, the world knows, that yesterday the President spoke a word that made happier the future of ten million peons in Mexico, but that act looms no larger on the flag than the struggle which the boy in Georgia is making to win the corn-club prize this summer. Yesterday Congress spoke a word which will open the door of Alaska, but a mother in Michigan worked from sunrise until far into the night to give her boy an education. She, too, is making the flag. Yesterday we made a new law to prevent financial panics; yesterday, no doubt, a school teacher in Ohio taught his first letters to a boy who will write a song that will give cheer to the millions of our race. We are all making the flag."

"But," I said, "these people were only working."

Then came a great shout from the flag:

"Let me tell you who I am. The work that we do is the making of the real flag. I am not the flag, not at all. I am but its shadow. I am whatever you make me, nothing more. I am your belief in yourself, your dream of what a people may become. I live a changing life, a life of moods and passions, of heartbreaks and tired muscles. Sometimes I am strong with pride, when men do an honest work, fitting the rails together truly. Sometimes I droop, for then purpose has gone from me, and cynically I play the coward. Sometimes I am loud, garish, and full of that ego that blasts judgment. But always I am all that you hope to be and have the courage to try for. I am song and fear, struggle and panic, and ennobling hope. I am the day's work of the weakest man and the largest dream of the most daring. I am the Constitution and the courts, statutes and statute makers, soldier and dreadnaught, drayman and street sweep, cook, counselor, and clerk. I am the battle of yesterday and the mistake of to-morrow. I am the mystery of the men who do without knowing why. I am the clutch of an idea and the reasoned purpose of resolution. I am no more than what you believe me to be, and I am all that you believe I can be. I am what you make me, nothing more. I swing before your eyes as a bright gleam of color, a symbol of yourself, the pictured suggestion of that big thing which makes this nation. My stars and my stripes are your

dreams and your labors. They are bright with cheer, brilliant with courage, firm with faith, because you have made them so out of your hearts, for you are the makers of the flag, and it is well that you glory in the making."

BUSINESS

SAM WALTER FOSS

"How is business?" asks the young man of the Spirit of the Years;
"Tell me of the modern output from the factories of fate,
And what jobs are waiting for me, waiting for me and my peers.
What's the outlook? What's the prospect? Are the wages small or great?"
"Business growing, more men needed," says the Spirit of the Years,
"Jobs are waiting for right workmen,—and I hope you are the men,—
Grand hard work and ample wages, work piled up in great arrears—
'Don't see any job particular?' Listen, and I'll tell you then.

"There are commonwealths to govern, there are senates to be swayed,
There are new States still undreamed of to be founded,
New empires in far oceans to be moulded—who's afraid?—

And a couple of polar oceans to be sounded.
Come, ye jolly empire-builders, here is work for you to do,
And we don't propose to get along without it.
Here's the little job of building the old planet over new,
And it's time to do the business. Get about it.

. . . . . .

"Sow the lonely plains with cities; thread the flowerless land with streams;
Go to thinking thoughts unthought-of, following where your genius leads,
Seeing visions, hearing voices, following stars, and dreaming dreams,
And then bid your dreams and visions bloom and flower into deeds.
"'Business rushing?' Fairly lively. There's a world to clean and sweep,
Cluttered up with wars and armies; 't is your work to brush 'em out;
Bid the fierce clinch-fisted nations clasp their hands across the deep;
Wipe the tired world of armies; 't is a fair day's work, no doubt.

. . . . . .

" 'What's your business?' Finding out things that no man could find,—
Things concealed by jealous Nature under locks, behind the bars;
Building paved and guttered highways for the onward march of mind

Through the spaces 'twixt the planets to the secrets of the stars.
'What's your business?' Think like Plato,—he did not exhaust all thought;
Preach like old Savonarola; rule like Alfred; do not shirk;
Paint like Raphael and Titian; build like Angelo—why not?
Sing like Shakespeare. 'How is business?' Rather lively. Get to work!"

—Courtesy of *Lothrop, Lee & Shepard Co.*

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